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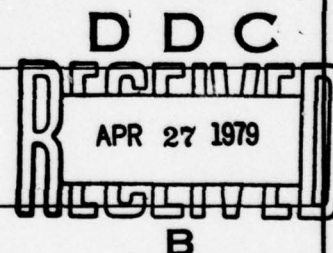
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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Body size information on both men and women of the U. S. Army is available in the form of data collected during several major anthropometric surveys carried out during the past 31 years. Anthropometric data for Army men and women measured in 1946, for Army men and male basic trainees measured in 1966, and for Army women and male basic trainees measured in 1977 are presented in this report. Anthropometric data for these six series of U. S. Army personnel are presented in summary		



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20. ABSTRACT (continued)

tables, in both centimeters and inches. Data for a total of 118 body measurements have been extracted from the summary tables and collated. Through the use of this format, all of the available anthropometric data for any one body measurement may be seen on two facing pages of statistical and percentile values, either in centimeters or in inches. Data for 14 workspace measurements of both Army men and women also are included.

Comparisons of body size between Army men of 1946 and 1966, between Army male basic trainees of 1966 and 1977, between Army women of 1946 and 1977, and between Army men of 1966 and Army women of 1977 are presented and discussed.

This summary of over 30 years of U. S. Army anthropometry indicates that there have not been any marked increases in the body size of U. S. Army personnel. A comparison of anthropometric data on Army men and women does indicate, however, that the differences in body size and proportions between men and women deserve serious consideration in the design and sizing of Army clothing and equipment intended for use by both men and women.

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PREFACE

Body size information on both men and women of the U. S. Army is available in the form of data from several major anthropometric surveys carried out during the past 31 years. Questions are frequently raised concerning changes or increases in body size over a period of time. With the increasing numbers as well as importance of women in the Army, questions regarding the differences in body size and proportions between men and women also are asked with increasing frequency. In order to facilitate reference to anthropometric data in answering such questions, U. S. Army anthropometric data collected between 1946 and 1977 have been collated and analyzed for presentation in this report.

The cooperation and assistance of many individuals in the computer processing of anthropometric data and in the preparation of previously published reports is gratefully acknowledge by the author of this report. Thanks are expressed particularly to Edmund Churchill, John T. McConville, Lloyd L. Laubach, Thomas Churchill, Ilse Tebbetts, and Jane Reese of the Anthropology Research Project, Webb Associates, Yellow Springs, Ohio. Thanks are expressed to Charles E. Clauser, Kenneth W. Kennedy, and Milton Alexander of the USAF Aerospace Medical Research Laboratories, Wright-Patterson Air Force Base, Ohio for many years of cooperation and support.

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UNITED STATES ARMY ANTHROPOMETRY: 1946-1977

1. INTRODUCTION

For some years, body size information in the form of anthropometric data have been utilized in military research and development programs. Knowledge of body size and proportions is essential for the design, sizing and tariffing of military clothing and personal equipment. Of even greater importance is the fact that anthropometric data are required as a basic input in the human engineering of military equipment systems: vehicles, aircraft, and various weapons systems. The anthropometric measurement of the military population provides the basis for a metric description of that population in terms of the ranges of variation in body size. Anthropometric data then may be applied in order to achieve accommodation, compatibility, integration, safety, improved performance and logistic efficiency in man/equipment systems.

In the 31-year period between 1946 and 1977, several major anthropometric surveys have been carried out on U. S. Army personnel, both men and women. Army men have been measured three times (1946, 1966, 1977), Army women have been measured twice (1946 and 1977), and Army aviators have been measured three times (1959, 1967, 1970). In the course of these surveys, a considerable amount of anthropometric data has been accumulated on the U. S. Army population. These data have been published in a large number of technical reports.¹ However, comparisons of data in order to examine differences or trends in body size are difficult when it becomes necessary to refer to several separate sources of information.

The purpose of this report is to collate and synthesize the U. S. Army anthropometric data collected during the last 31 years and to present these data in a standardized format. With such a presentation, it is possible to analyze changes in body size in the Army population over a period of time. More importantly, anthropometric data for Army men and women may be examined and compared as a basis for design and sizing criteria for clothing and materiel which may be required for use by both men and women.

¹White, R. M. An annotated bibliography of U. S. Army anthropology (1947-1977). Technical Report NATICK/TR-78/012, U. S. Army Natick Research and Development Command, Natick, Mass., 1977. (AD A060 939)

2. THE U. S. ARMY ANTHROPOMETRIC SERIES

The anthropometric data presented in this report are based upon six series: Army men — 1946; Army women — 1946; Army men — 1966; Army men (basic trainees) — 1966; Army women — 1977; and Army men (basic trainees) — 1977. Anthropometric data on U. S. Army aviation personnel will not be included in this report.

a. U. S. Army Men — 1946

A major anthropometric survey of U. S. Army men was carried out by the Quartermaster Corps in 1946 under the direction of Francis E. Randall. In this survey, 105,062 men were measured at six separation centers; of the total, 96,381 men were World War II separatees and 8,681 men were new inductees. Sixty-six body measurements were obtained on all individuals. This was the first extensive Army anthropometric survey to be conducted primarily to provide body size data for the design, sizing and tariffing of military clothing and personal equipment. The tremendous volume of data accumulated in this survey proved difficult to process in detail with punched cards before the use of high-speed computers and magnetic tapes. Consequently, data on a selected sample of approximately 25,000 men were utilized as a "working series" for the 1946 Army men. A large number of technical reports have been published on these data and their applications for clothing; these may be found in the annotated bibliography published by White in 1977.² A report on the methodology of this survey by Randall and Baer was published in 1947;³ this was subsequently republished in a revised edition by Newman and White in 1951. The 1946 anthropometric data on men were published in 1951 by Newman and White in a report containing bivariate charts and regression tables.⁴

²see reference 1.

³Randall, F. E., and M. J. Baer. Survey of body size of Army personnel, male and female; Project No. E-59-46, Phase I, Report No. 1 — Methodology. Report No. 122, U. S. Army Quartermaster Climatic Research Laboratory, Lawrence, Mass., 1947. Revised edition by R. W. Newman and R. M. White published in 1951. (AD 149 458)

⁴Newman, R. W., and R. M. White. Reference anthropometry of Army men. Report No. 180, U. S. Army Quartermaster Climatic Research Laboratory, Lawrence, Mass., 1951. (AD 149 45)

b. U. S. Army Women — 1946

In the anthropometric survey carried out by the Quartermaster Corps in 1946, 8,864 U. S. Army women were measured at three Army separation centers. The women included 5,216 Women's Army Corps (WAC) officers and enlisted women, and 3,648 Army nurses. Sixty-five body measurements were taken. A report by Randall on the methodology of this survey was published in 1947,⁵ while the data on women were published in 1949 by Randall and Munro in a report containing bivariate charts and regression tables.⁶ In the first publications of the data, all of the measurements taken on women were not analyzed. Consequently, the 1946 anthropometric data on Army women subsequently were transferred from punched cards to magnetic tape in 1972 and the data were edited through the use of computer programs. As a result, anthropometric data for all of the body measurements taken now are available on 8,100 women; the change in the total from 8,864 to 8,100 women was the result of the elimination of faulty data in the original punched cards.

c. U. S. Army Men — 1966

As a part of the U. S. Armed Forces anthropometric surveys of 1966, a total of 6,682 Army men were measured. The Army series included basic trainees (40%), infantrymen (51%), armored crewmen (7%), and a small group of Army aviation personnel (2%). The men were measured at twelve Army installations throughout the United States between November, 1965 and April, 1966. Seventy body measurements were taken on each man. The anthropometric data from this survey represent the first major updating of body size information of U. S. Army personnel since the Quartermaster survey of 1946. A report on the 1966 survey of Army men was prepared by White and Churchill and published in 1971.⁷ Changes in the body size of Army men between 1946 and 1966 were discussed in this report.

⁵ Randall, F. E. Survey of body size of Army personnel, male and female; Project E-59-46, Phase 4, Report No. 1 — Methodology and general considerations (female). Report No. 123, U. S. Army Quartermaster Climatic Research Laboratory, Lawrence, Mass., 1947. (AD 209 809)

⁶ Randall, F. E., and E. H. Munro. Reference anthropometry of Army women. Report No. 149, U. S. Army Quartermaster Climatic Research Laboratory, Lawrence, Mass., 1949. (AD 209 837)

⁷ White, R. M., and E. Churchill. The body size of soldiers: U. S. Army anthropometry-1966. Technical Report 72-51-CE, U. S. Army Natick Laboratories, Natick, Mass., 1971. (AD 743 465)

d. U. S. Army Men (Basic Trainees) — 1966

The 1966 anthropometric survey of U. S. Army men included the measurement of 2,639 basic trainees. Seventy body measurements were taken on each man. The basic trainees of 1966 included both draftees and Regular Army enlistees. Since they were just beginning their Army training, they were a young group of men with less than one month of service. The anthropometric data for basic trainees were presented in the technical report on the 1966 Army survey.⁸

e. U. S. Army Women — 1977

An anthropometric survey of U. S. Army women was conducted between November, 1976 and February, 1977, with women measured at Fort Sam Houston, Texas; Fort McClellan, Alabama; Walter Reed Medical Center, Washington, D. C.; and Fort Jackson, South Carolina. Anthropometric data for 69 basic body measurements were obtained on a sample of 1,331 women. An additional 28 body measurements were taken on 255 women, and 31 head and face measurements were made on 216 women. In addition to the conventional anthropometry, 14 workspace measurements were taken on 300 women, and 9 static muscle strength measurements were made on 349 women. The 1,331 women measured included 116 officers, 228 Army nurses, and 987 enlisted women. The 1977 survey of women resulted in the first updating of body size information on Army women since the Quartermaster survey of 1946. The results of the anthropometric survey were published in 1977 in a series of three reports by various authors.^{9,10,11}

⁸See reference 7.

⁹Laubach, L. L., J. T. McConville, E. Churchill and R. M. White. Anthropometry of women of the U. S. Army-1977; Report No. 1 — Methodology and survey plan. Technical Report NATICK/TR-77/021, U. S. Army Natick Research and Development Command, Natick, Mass., 1977. (AD A043 715)

¹⁰Churchill, E., T. Churchill, J. T. McConville and R. M. White. Anthropometry of women of the U. S. Army-1977; Report No. 2 — The basic univariate statistics. Technical Report NATICK/TR-77/024, U. S. Army Natick Research and Development Command, Natick, Mass., 1977. (AD A044 806)

¹¹Churchill, T., E. Churchill, J. T. McConville and R. M. White. Anthropometry of women of the U. S. Army-1977; Report No. 3 — Bivariate frequency tables. Technical Report NATICK/TR-77/028, U. S. Army Natick Research and Development Command, Natick, Mass., 1977. (AD A046 692)

f. U. S. Army Men (Basic Trainees) - 1977

At the conclusion of the anthropometric survey of U. S. Army women in 1977, a sample of 287 Army men were measured. This group consisted of newly-inducted men who were undergoing basic training at Fort Jackson, South Carolina. The opportunity to obtain measurements on men made by the same technicians at the same time and place, and using precisely the same measuring techniques, provided a unique source of comparative data for the design of Army clothing, equipment and workspaces which, increasingly, must accommodate the wide range of sizes represented by both sexes. Fifty-seven of the 93 body measurements taken on women were made on the sample of men, while 31 head and face measurements were taken on 102 men. In addition, 14 workspace measurements were made on 106 men, and 9 static muscle strength measurements were made on 102 men. A report of the anthropometric data on the Army men measured in 1977 was published by McConville, E. Churchill, T. Churchill and White in 1977.¹²

g. U. S. Army Aviation Personnel

U. S. Army aviation personnel have been measured in three anthropometric surveys. In the first, carried out in 1959, 500 Army aviators were measured at four Army posts; 40 body measurements were taken on each man. The sample included commissioned and warrant officers, and both fixed-wing and rotary-wing pilots were represented. This was the first such survey on Army aviators. A technical report on the survey was published by White in 1961.¹³ In the second survey, 1,640 Army warrant officer candidate flight trainees were measured at Fort Rucker, Alabama in 1967-1968; nine body measurements were made. A report on this work was published by Schane et al., in 1969.¹⁴ In the third survey, a sampling of 1,482 Army aviation personnel were measured at Fort Rucker,

¹²McConville, J. T., E. Churchill, T. Churchill and R. M. White. Anthropometry of Women of the U. S. Army -1977; Report No. 5 - Comparative data for U. S. Army men. Technical Report NATICK/TR-77/029, U. S. Army Natick Research and Development Command, Natick, Mass., 1977. (AD A048 591)

¹³White, R. M. Anthropometry of Army aviators. Technical Report EP-150, U. S. Army Quartermaster Research and Engineering Center, Natick, Mass., 1961. (AD 363 357)

¹⁴Schane, W. P., D. E. Littell and C. G. Moultrie. Selected anthropometric measurements of 1640 U. S. Army warrant officer flight candidate trainees. USAARL Report No. 69-2, U. S. Army Aeromedical Research Laboratory, Fort Rucker, Alabama, 1969. (AD 688 856)

Alabama in 1970. The series included enlisted men (crew chiefs, mechanics, door gunners), warrant officer and warrant officer candidate trainees, warrant officer rated pilots, commissioned trainees, and commissioned pilots; both fixed-wing and rotary-wing pilots were represented. Eighty-five anthropometric measurements were made on each individual. The report of this survey was prepared by Churchill, McConville, Laubach and White and published in 1971.¹⁵

Due to different criteria of selection and training, U. S. Army aviation personnel are considered to be a specialized segment of the Army population. Anthropometric data on Army aviators show some differences from Army men in general. The anthropometry of Army aviators is not discussed in this report; detailed anthropometric data on U. S. Army aviators may be found in the referenced technical reports.

¹⁵ Churchill, E., J. T. McConville, L. L. Laubach and R. M. White. Anthropometry of U. S. Army aviators—1970. Technical Report 72-52-CE, U. S. Army Natick Laboratories, Natick, Mass., 1971. (AD 743 528)

3. MILITARY DOCUMENTATION OF ANTHROPOMETRIC DATA

In addition to publication in technical reports, U. S. Army anthropometric data now are included in official documents published by the U. S. Department of Defense. Several of these will be reviewed in order to indicate the anthropometric data which are presented.

a. Military Standard 1472

Military Standard: Human Engineering Design Criteria for Military Systems, Equipment and Facilities (MIL-STD-1472), approved by the Department of Defense, is mandatory for use by all Departments and Agencies of the Department of Defense. This document was first published 9 February 1968. Anthropometric data in the first edition consisted of 5th and 95th percentile values (in both inches and centimeters) for measurements of men representing U. S. Air Force flying personnel (1950), U. S. Navy aviators (1964), and U. S. Army separatees (1946). The second edition, MIL-STD-1472A, dated 15 May 1970, included 5th and 95th percentile values for measurements of men representing U. S. Army personnel (1966), U. S. Navy aviators (1964), and U. S. Air Force flying personnel (1967). The third edition, MIL-STD-1472B, dated 31 December 1974,¹⁶ presented anthropometric data in the form of 5th and 95th percentile values for measurements of ground troops, aviators, and women. Data for ground troops consisted of measurements of 6,682 U. S. Army men and 2,008 U. S. Marines, both measured in 1966. Data for aviators were based on measurements of 1,482 U. S. Army aviators (1970), of 1,549 U. S. Navy Pilots (1964), and of 2,400 U. S. Air Force flying personnel (1967). The anthropometric data for military women consisted of measurements of 8,100 U. S. Army WAC personnel and Army nurses, measured in 1946, and of 1,905 U. S. Air Force WAF personnel and USAF nurses, measured in 1968.

The latest revision of MIL-STD-1472B consists of Notice-2, dated 30 May 1978. In this document, the anthropometric data for ground troops include data on 287 Army men (basic trainees) measured in 1977, as well as on Army men and U. S. Marines measured in 1966. There have been no changes in the Army, Navy and Air Force data for aviators. The anthropometric data for women are based upon measurements of 1,330 U. S. Army women and nurses, measured in 1977, and of 1,905 U. S. Air Force WAF personnel and nurses, measured in 1968.

¹⁶Department of Defense. Military standard: Human engineering design criteria for military systems, equipment and facilities. MIL-STD-1472B. U. S. Government Printing Office, Washington, D.C., 31 December 1974.

b. Military Standardization Handbook 759

A military standardization handbook entitled Human Factors Engineering Design for Army Materiel (MIL-HDBK-759) was published on 12 March 1975.¹⁷ This document, developed by the U. S. Army Human Engineering Laboratory, provides basic information on human factors engineering design for Army materiel. However, it is not intended to be referenced in its entirety for mandatory use in procurement specifications except for informational purposes. U. S. Army anthropometric data are included in this handbook. The data consist of selected percentile values between the 1st and 99th percentiles, given in both centimeters and inches. Data presented are for a total series of 6,682 Army men, for 2,639 basic trainees, for 3,429 infantrymen, and for 489 armored crewmen, measured in 1966; for 1,482 U. S. Army aviation personnel (1970); and for 8,100 U. S. Army WAC personnel and Army nurses (1946). A revised edition of MIL-HDBK-759 is in preparation in which the 1946 data on Army women will be replaced and superseded by the new 1977 anthropometric data on Army women.

c. Engineering Design Handbook: Metric Conversion Guide

An Engineering Design Handbook: Metric Conversion Guide (DARCOM Pamphlet 706-470) was published by Headquarters, U. S. Army Materiel Development and Readiness Command, dated 5 July 1976.¹⁸ This document pertains to the process of conversion to the International System of Units (SI) or the "metric" system from the English or "inch" system (U. S. customary units). In an example selected to illustrate conversion from centimeters to inches or from inches to centimeters, U. S. Army anthropometric data are presented in a table of percentile values in both centimeters and inches; these data were taken from MIL-STD-759.

¹⁷ Department of Defense. Military standardization handbook: Human factors engineering design for Army materiel. MIL-HDBK-759. U. S. Government Printing Office, Washington, D. C., 12 March 1975.

¹⁸ Department of the Army. Engineering design handbook: Metric conversion guide. DARCOM Pamphlet 706-470. Headquarters, U. S. Army Materiel Development and Readiness Command. U. S. Government Printing Office, Washington, D.C., 5 July 1976.

4. THE U. S. ARMY SOURCE DATA

a. Summary Tables of Anthropometric Data

U. S. Army anthropometric data for men and women measured between 1946 and 1977 are presented in 24 summary tables. The sequence of these tables is: U. S. Army men - 1946, U. S. Army men - 1966, U. S. Army men (basic trainees) - 1966, U. S. Army men (basic trainees) - 1977, U. S. Army women - 1946, and U. S. Army women - 1977. Comparisons of body size between Army men of 1946 and 1966, between Army women of 1946 and 1977, or between Army men of 1966 and Army women of 1977 may be made with reference to these data. The men measured in 1977 at the conclusion of the anthropometric survey of Army women were Army basic trainees; since any direct comparison of data should be made between similar groups, data for the 1966 basic trainees are included here in order to provide comparative data for an evaluation of body size in these young men.

Two tables of data are given for each of these Army series. The first table contains statistical values and the second table presents selected percentile values for the anthropometric measurements. The metric system is used in the initial collection of anthropometric data and all body measurements (except for weight) are made in millimeters. Therefore, the first set of 12 summary tables shows statistical and percentile values expressed in centimeters. Since conversion to and use of the metric system is still in a transitional phase in the United States, many users of anthropometric data are not as yet familiar with data in centimeters. Consequently the second set of 12 summary tables shows statistical and percentile values expressed in inches (U. S. customary units).

The summary tables presented here show all of the anthropometric data obtained for each of the six representative series under discussion. These tables thus indicate the source data which may be used for further analyses or applications. While all of the anthropometric data have been published previously in technical reports, only the 1966 data on Army men and the 1966 data on basic trainees have been presented in the form of summary tables. Most of these tables then have not been published before. Anthropometric data for other specific samples of Army men, such as infantrymen or armored crewmen, may be found in the published technical report on the 1966 anthropometric survey of U. S. Army men.

Detailed information on definitions of the body measurements and on measurement techniques may be found in the referenced technical reports. The locations of measurements on the body and the methods of measurement also are illustrated in the technical reports. Information on the terminology of body measurements may be found in the Appendix (page 286) of this report.

It should be emphasized that the anthropometric data presented in these tables represent body measurements of men wearing only undershorts and of women wearing only bra and panties; thus they are essentially nude body measurements.

b. Statistical and Percentile Values

Conventional statistical values for the anthropometric data are shown in the statistical tables. These are: the number of individuals measured (N), the arithmetic mean (or average) value for the measurement (Mean), the standard error of the mean (SE(M)), the standard deviation (S.D.), the standard error of the standard deviation (SE(SD)), and the coefficient of variation, expressed as a percent (V(%)). The range for each measurement is indicated by the minimum value (Min.), the maximum value (Max.), and the total range, which is the difference between the minimum and maximum values. Finally, a stature ratio is given. This is obtained by dividing the mean value for each measurement by the mean stature for that series. The ratios shown in the tables may be converted into percentages by multiplying by 100. A stature ratio of 0.520 for sitting height, for example, indicates that mean sitting height is 52 percent of mean stature for that particular series. The stature ratios thus serve as a useful basis for the comparison of body proportions.

Selected percentile values are shown in the percentile tables. These are: the 1st, 2nd, 5th, 10th, 25th, 50th, 75th, 90th, 95th, 98th, and 99th percentiles for each measurement. However, due to the small sample size (287 men), only selected percentile values between the 5th and the 95th percentiles are given for the 1977 U. S. Army basic trainees. The 50th percentile value is the median value for each measurement. The range in the percentile tables shows the difference or spread between the 1st and 99th percentile values.

c. Tables of Statistical and Percentile Values in Centimeters

In the following twelve summary tables of anthropometric data, statistical and percentile values are presented for: U. S. Army men — 1946, U. S. Army men — 1966, U. S. Army men (basic trainees) — 1966, U. S. Army men (basic trainees) — 1977, U. S. Army women — 1946, and U. S. Army women — 1977. Values are expressed in centimeters for all of the body measurements, while weight is shown in kilograms and age is given in years.

The body measurements in these tables are grouped under the following headings: Weight, Standing Measurements, Sitting Measurements, Depth and Breadth Measurements, Circumferences, Limb Circumferences, Surface Measurements, Head and Face Measurements, Hand Measurements, Foot Measurements, and Age.

Similar summary tables of statistical and percentile values given in inches may be found beginning on page 79.

TABLE 1. STATISTICAL VALUES FOR U. S. ARMY MEN - 1946

No.	Measurements	N	Mean	SE(M)	Values in Centimeters					Stature ratio
					S.D.	SE(SD)	V(%)	Min.	Range Max.	
1	Weight (kilograms)	24,506	70.22	0.06	9.32	0.04	13.29	43.1	138.3	95.2
STANDING MEASUREMENTS										
2	Stature	24,508	173.91	0.04	6.39	0.03	3.67	150.0	200.0	50.0
3	Cervicale Height	21,141	149.20	0.04	6.05	0.03	4.05	127.0	175.0	48.0
4	Wais' (Iliocristale) Height	24,469	105.55	0.03	4.97	0.02	4.71	83.0	127.0	44.0
5	Crotch Height	24,497	83.42	0.03	4.45	0.02	5.33	65.0	101.0	36.0
6	Thigh Length	24,625	38.17	0.02	3.34	0.01	8.75	23.0	55.0	32.0
7	Tibiale Height	24,664	45.56	0.02	2.85	0.01	6.26	35.5	59.5	24.0
8	Shoulder-Fingertip Length	24,449	77.42	0.02	3.53	0.01	4.56	61.0	93.0	32.0
SITTING MEASUREMENTS										
9	Sitting Height	24,352	90.88	0.02	3.41	0.01	3.75	77.0	105.0	28.0
10	Trunk Height, Sitting	24,715	58.44	0.02	2.96	0.01	5.06	45.0	69.0	24.0
11	Acromiale-Radiale Length	24,348	33.35	0.01	1.90	0.00	5.70	23.5	40.5	17.0
12	Shoulder-Elbow Length	24,556	36.28	0.01	2.06	0.00	5.68	25.0	49.0	24.0
13	Elbow-Fingertip Length	24,354	47.58	0.01	2.23	0.00	4.69	37.5	59.5	22.0
14	Knee Height, Sitting	24,419	54.91	0.02	2.76	0.01	5.03	39.0	69.0	30.0
15	Buttock-Knee Length	24,244	59.43	0.02	2.85	0.01	4.80	49.0	71.0	22.0
DEPTH AND BREADTH MEASUREMENTS										
16	Chest Depth	24,558	21.16	0.01	1.90	0.00	8.98	13.5	32.5	19.0
17	Trunk Depth	24,588	23.08	0.01	2.06	0.00	8.92	16.5	35.5	19.0
18	Shoulder (Bideltoide) Breadth	24,461	45.59	0.01	2.51	0.00	5.50	35.0	59.0	24.0
19	Chest Breadth	24,574	28.29	0.01	1.96	0.00	6.93	20.5	38.5	18.0
20	Bi-iliac Breadth	24,518	29.10	0.01	2.02	0.00	6.94	22.5	40.5	18.0
21	Elbow-Elbow Breadth	24,590	44.54	0.02	3.90	0.01	8.76	34.5	61.5	27.0
22	Hip Breadth, Sitting	24,575	35.44	0.01	2.28	0.00	6.43	28.5	50.5	22.0

TABLE 1. STATISTICAL VALUES FOR U. S. ARMY MEN - 1946 (continued)

Values in Centimeters										
No.	Measurements	N	Mean	SE(M)	S.D.	SE(SD)	V(%)	Range		Stature ratio
								Min.	Max.	
CIRCUMFERENCES										
23	Neck Circumference	24,423	36.74	0.01	1.86	0.00	5.06	29.5	48.5	.211
24	Shoulder Circumference	3,409	109.87	0.11	6.38	0.08	5.81	90.0	137.9	.632
25	Chest Circumference	24,470	92.41	0.04	5.96	0.02	6.45	71.0	123.0	.531
26	Waist Circumference	24,472	77.73	0.04	7.01	0.03	9.02	59.0	119.0	.447
27	Hip (Buttock) Circumference	24,500	93.14	0.04	5.70	0.02	6.12	67.0	127.0	.536
28	Vert. Trunk Circum., Sitting	24,388	157.67	0.04	6.77	0.03	4.29	126.5	190.5	.907
LIMB CIRCUMFERENCES										
29	Scye Circumference	24,383	43.40	0.02	2.98	0.01	6.87	35.2	56.2	.250
30	Axillary Arm Circumference	24,729	30.83	0.01	2.71	0.00	8.79	21.2	40.2	.177
31	Biceps Circum., Relaxed	24,446	28.06	0.01	2.36	0.00	8.41	20.2	39.2	.161
32	Lower Upper Arm Circum.	24,769	25.07	0.01	1.89	0.00	7.54	19.2	37.2	.144
33	Forearm Circum., Relaxed	24,491	26.76	0.01	1.64	0.00	6.13	20.2	34.2	.154
34	Mid-Forearm Circumference	24,492	24.12	0.01	2.24	0.00	9.29	15.2	33.2	.139
35	Wrist Circumference	24,391	17.02	0.00	1.03	0.00	6.05	13.5	21.0	.098
36	Upper Thigh Circumference	24,832	54.45	0.03	4.32	0.02	7.93	41.2	70.2	.313
37	Mid-Thigh Circumference	24,446	48.96	0.02	3.97	0.01	8.11	38.2	67.2	.282
38	Lower Thigh Circumference	24,711	37.40	0.01	2.68	0.00	7.16	29.2	50.2	.215
39	Upper Leg Circumference	24,456	33.61	0.01	2.13	0.00	6.34	26.2	43.2	.193
40	Calf Circumference	24,686	35.76	0.01	2.38	0.00	6.66	27.2	47.2	.206
41	Ankle Circumference	24,297	26.31	0.00	1.45	0.00	5.51	20.5	34.0	.151
SURFACE MEASUREMENTS										
42	Shoulder Length	24,453	15.37	0.01	1.70	0.00	11.06	10.2	21.2	.088
43	Interscye, Back	24,432	37.63	0.02	3.00	0.01	7.97	24.5	50.5	.216
44	Sleeve Length	24,470	81.00	0.03	4.39	0.02	5.42	63.0	99.0	.466
45	Crotch Length	24,434	72.32	0.04	5.70	0.02	7.88	51.0	99.0	.415

TABLE 1. STATISTICAL VALUES FOR U. S. ARMY MEN - 1946 (continued)

No.	Measurements	N	Mean	SE(M)	S.D.	SE(SD)	V(%)	Range		Stature ratio
								Min.	Max.	
HEAD AND FACE MEASUREMENTS										
46	Head Circumference	24,466	56.65	0.01	1.58	0.00	2.79	49.5	63.5	.326
47	Head Length	24,471	19.47	0.00	0.70	0.00	3.60	15.5	23.0	.112
48	Frontocanthus-Otobasion Sup.	24,478	8.54	0.00	0.52	0.00	6.09	6.0	11.0	.049
49	Head Breadth	24,447	15.21	0.00	0.59	0.00	3.88	12.5	18.0	.087
50	Head Height (Trag.-t. of h.)	24,630	13.11	0.00	0.60	0.00	4.58	10.0	16.0	.075
51	Face Length (Menton-Sellion)	24,494	12.50	0.00	0.71	0.00	5.68	10.0	16.0	.072
52	Minimum Frontal Breadth	24,406	10.93	0.00	0.59	0.00	5.40	9.0	15.0	.063
53	Face Breadth (Bizygomatic)	24,389	13.90	0.00	0.60	0.00	4.32	11.0	16.5	.080
54	Bigonial Breadth	24,432	10.76	0.00	0.60	0.00	5.58	8.0	14.5	.062
55	Biocular Breadth	24,361	9.22	0.00	0.51	0.00	5.53	7.0	12.0	.053
56	Interocular Breadth	24,359	3.24	0.00	0.31	0.00	9.57	2.0	4.8	.019
57	Nose Length (Subnas.-Sell.)	24,411	5.53	0.00	0.50	0.00	9.04	3.8	7.8	.032
58	Nasal Root Breadth	24,348	1.42	0.00	0.23	0.00	16.20	0.7	2.6	.008
59	Nose Breadth	24,382	3.37	0.00	0.29	0.00	8.60	2.0	5.5	.019
HAND MEASUREMENTS										
60	Hand Length	24,487	19.25	0.00	0.93	0.00	4.83	15.0	23.0	.111
61	Hand Breadth	24,488	8.67	0.00	0.48	0.00	5.54	6.0	11.0	.050
FOOT MEASUREMENTS										
62	Foot Length	24,372	26.51	0.00	1.21	0.00	4.74	21.0	30.5	.152
63	Instep Length	24,475	19.33	0.00	1.12	0.00	5.79	14.0	24.5	.111
64	Foot Breadth	24,466	9.82	0.00	0.63	0.00	6.42	6.5	13.0	.056
65	Heel Breadth	24,341	6.70	0.00	0.53	0.00	7.91	4.0	10.0	.039
66	Ball of Foot Circumference	24,468	24.63	0.00	1.28	0.00	5.20	20.0	30.0	.142
Age (years)		24,502	24.28	0.03	4.94	0.02	20.35	15.0	57.0	42.0

TABLE 2. PERCENTILE VALUES FOR U. S. ARMY MEN - 1946

No.	Measurements	Percentiles in Centimeters										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		
1	Weight (kilograms)	51.9	53.5	56.4	59.0	64.0	69.4	75.7	82.1	87.0	93.0	97.5	45.6
STANDING MEASUREMENTS													
2	Stature	159.3	160.8	163.3	165.9	169.7	174.0	178.3	182.4	184.4	187.2	189.2	29.9
3	Cervicale Height	135.1	136.7	139.2	141.5	145.0	149.1	153.2	157.0	159.3	161.8	163.6	28.5
4	Waist (Iliocristale) Height	94.2	95.2	97.3	99.1	102.1	105.4	109.0	111.8	113.8	116.1	117.6	23.4
5	Crotch Height	73.2	74.4	76.2	77.7	80.5	83.3	86.4	89.2	90.9	93.0	94.5	21.3
6	Thigh Length	30.2	31.0	32.5	33.8	35.8	38.1	40.4	42.4	43.7	45.2	46.2	16.0
7	Tibiale Height	39.1	39.9	41.1	41.9	43.7	45.5	47.5	49.3	50.5	51.8	52.8	13.7
8	Shoulder-Fingertip Length	69.1	70.1	71.6	72.9	74.9	77.5	79.8	82.0	83.3	84.8	85.9	16.8
SITTING MEASUREMENTS													
9	Sitting Height	82.6	83.6	85.1	86.4	88.4	90.9	93.2	95.2	96.5	98.0	99.1	16.5
10	Trunk Height, Sitting	51.1	51.8	53.3	54.4	56.4	58.4	60.5	62.2	63.5	64.8	65.5	14.4
11	Acromiale-Radiale Length	29.0	29.5	30.2	30.7	32.0	33.3	34.5	35.8	36.6	37.3	37.8	8.8
12	Shoulder-Elbow Length	31.2	31.8	32.8	33.5	34.8	36.3	37.6	38.9	39.6	40.6	41.4	10.2
13	Elbow-Fingertip Length	42.2	42.9	43.9	44.7	46.0	47.5	49.0	50.3	51.1	52.1	52.8	10.6
14	Knee Height, Sitting	48.3	49.0	50.3	51.3	53.1	54.9	56.9	58.7	59.7	61.0	61.7	13.4
15	Buttock-Knee Length	52.6	53.3	54.6	55.6	57.4	59.4	61.5	63.0	64.0	65.3	66.0	13.4

TABLE 2. PERCENTILE VALUES FOR U. S. ARMY MEN - 1946 (continued)

No.	Measurements	Percentiles in Centimeters										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		99th
DEPTH AND BREADTH MEASUREMENTS													
16	Chest Depth	17.3	17.5	18.3	18.8	19.8	21.1	22.4	23.6	24.4	25.7	26.7	9.4
17	Trunk Depth	19.0	19.3	20.1	20.6	21.6	22.9	24.1	25.7	26.7	28.2	29.2	10.2
18	Shoulder (Bidel.) Breadth	40.1	40.6	41.7	42.4	43.9	45.5	47.2	48.8	49.8	51.3	52.3	12.2
19	Chest Breadth	23.6	24.4	25.4	25.9	26.9	28.2	29.5	30.7	31.5	32.5	33.5	9.9
20	Bi-iliac Breadth	24.6	25.1	26.2	26.7	27.7	29.0	30.5	31.8	32.5	33.8	34.5	9.9
21	Elbow-Elbow Breadth	36.6	37.3	38.9	39.9	41.9	44.2	46.7	49.5	51.6	52.6	55.4	18.8
22	Hip Breadth, Sitting	31.0	31.5	32.3	32.8	34.0	35.3	36.8	38.4	39.4	41.1	42.4	11.4
CIRCUMFERENCES													
23	Neck Circumference	32.5	33.0	33.8	34.3	35.3	36.6	37.8	39.1	39.9	40.9	41.7	9.2
24	Shoulder Circumference	96.5	97.5	99.6	101.6	104.6	108.2	112.0	115.8	118.4	121.2	123.2	26.7
25	Chest Circumference	80.3	81.5	83.6	85.3	88.4	91.9	96.0	100.1	102.9	106.4	109.2	28.9
26	Waist Circumference	65.0	66.3	68.3	69.8	72.9	76.7	81.3	86.6	90.9	95.8	99.3	34.3
27	Hip (Buttock) Circumference	80.5	82.0	84.6	86.4	89.2	92.7	96.5	100.3	102.9	106.2	108.7	28.2
28	Vert. Trunk Circum., Sit.	141.7	143.8	146.8	149.1	152.9	157.5	162.1	166.4	169.2	172.7	175.3	33.6

TABLE 2. PERCENTILE VALUES FOR U. S. ARMY MEN - 1946 (continued)

No.	Measurements	Percentiles in Centimeters										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		
LIMB CIRCUMFERENCES													
29	Sye Circumference	36.8	37.6	38.9	39.9	41.4	43.2	45.2	47.2	48.5	50.0	51.1	14.3
30	Axillary Arm Circumference	25.1	25.7	26.7	27.4	29.0	30.7	32.5	34.3	35.6	37.1	38.1	13.0
31	Biceps Circum., Relaxed	23.1	23.6	24.3	25.1	26.4	27.9	29.5	31.2	32.3	33.5	34.3	11.2
32	Lower Upper Arm Circum.	21.1	21.3	22.1	22.6	23.6	24.9	26.2	27.4	28.4	29.5	30.2	9.1
33	Forearm Circum., Relaxed	22.9	23.4	24.1	24.6	25.7	26.7	27.7	28.7	29.5	30.2	30.7	7.8
34	Mid-Forearm Circumference	19.0	19.6	20.3	21.1	22.6	24.1	25.7	27.2	27.9	29.0	29.5	10.5
35	Wrist Circumference	14.7	15.0	15.2	15.7	16.3	17.0	17.8	18.5	18.8	19.3	19.6	4.9
36	Upper Thigh Circumference	45.5	46.2	47.8	49.0	51.3	54.1	57.2	60.2	62.2	64.5	66.0	20.5
37	Mid-Thigh Circumference	40.6	41.4	42.7	43.9	46.2	48.8	51.6	54.9	55.9	57.7	58.9	18.3
38	Lower Thigh Circumference	31.8	32.3	33.3	34.0	35.6	37.3	39.1	40.9	42.2	43.7	44.7	12.9
39	Upper Leg Circumference	29.2	29.5	30.2	31.0	32.0	33.5	35.1	36.3	37.3	38.6	39.4	10.2
40	Calf Circumference	30.5	31.0	32.0	32.8	34.0	35.6	37.1	38.9	39.6	41.1	41.9	11.4
41	Ankle Circumference	23.1	23.4	23.9	24.4	25.1	26.2	27.2	28.2	28.7	29.5	30.0	6.9

TABLE 2. PERCENTILE VALUES FOR U. S. ARMY MEN - 1946 (continued)

No.	Measurements	Percentiles in Centimeters										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		99th
SURFACE MEASUREMENTS													
42	Shoulder Length	10.9	11.4	12.4	13.2	14.2	15.5	16.5	17.5	18.0	18.8	19.0	8.1
43	Interscye, Back	30.7	31.5	32.8	33.8	35.6	37.6	39.6	41.4	42.7	43.9	45.0	14.3
44	Sleeve Length	70.9	71.6	73.9	75.4	78.0	81.0	84.1	86.6	88.4	90.2	91.4	20.5
45	Crotch Length	59.9	61.2	63.5	65.3	68.3	71.9	75.7	79.5	82.0	86.4	90.2	30.3
HEAD AND FACE MEASUREMENTS													
46	Head Circumference	53.0	53.5	54.1	54.6	55.6	56.6	57.7	58.7	59.3	60.1	60.6	7.6
47	Head Length	17.8	18.0	18.3	18.6	19.0	19.5	20.0	20.4	20.6	20.9	21.2	3.4
48	Ectocanthus-Otobasion Sup.	7.3	7.5	7.7	7.9	8.2	8.5	8.9	9.2	9.4	9.6	9.8	2.5
49	Head Breadth	13.8	14.0	14.3	14.5	14.8	15.2	15.6	16.0	16.2	16.5	16.7	2.9
50	Head Height (Trag.-t. of h.)	11.6	11.8	12.1	12.3	12.7	13.1	13.5	13.9	14.2	14.5	14.7	3.1
51	Face Length (Menton-Sellion)	10.8	11.0	11.4	11.6	12.0	12.5	13.0	13.4	13.7	14.0	14.2	3.4
52	Minimum Frontal Breadth	9.6	9.7	10.0	10.2	10.5	10.9	11.3	11.7	11.9	12.2	12.4	2.8
53	Face Breadth (Bizygomatic)	12.4	12.6	12.9	13.1	13.5	13.9	14.3	14.7	14.9	15.1	15.3	2.9
54	Bigonial Breadth	9.4	9.5	9.8	10.0	10.4	10.7	11.2	11.5	11.7	12.1	12.3	2.9

TABLE 2. PERCENTILE VALUES FOR U. S. ARMY MEN - 1946 (continued)

No.	Measurements	Percentiles in Centimeters										Range (1st-99th)
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th	
HEAD AND FACE MEASUREMENTS (continued)												
55	Biocular Breadth	8.0	8.1	8.4	8.5	8.8	9.2	9.6	9.9	10.1	10.4	2.5
56	Interocular Breadth	2.5	2.7	2.8	2.9	3.0	3.2	3.4	3.6	3.8	4.0	1.6
57	Nose Length (Subnas.-Sell.)	4.4	4.5	4.8	4.9	5.2	5.5	5.8	6.2	6.4	6.6	2.4
58	Nasal Root Breadth	1.0	1.0	1.0	1.1	1.3	1.4	1.6	1.8	1.8	2.0	1.0
59	Nose Breadth	2.8	2.8	3.0	3.0	3.2	3.4	3.6	3.8	3.9	4.0	1.3
HAND MEASUREMENTS												
60	Hand Length	17.1	17.4	17.8	18.1	18.6	19.2	19.8	20.4	20.8	21.2	4.4
61	Hand Breadth	7.5	7.6	7.8	8.0	8.3	8.7	9.0	9.3	9.5	9.7	2.4
FOOT MEASUREMENTS												
62	Foot Length	23.6	24.0	24.5	24.9	25.7	26.5	27.4	28.1	28.6	29.0	5.7
63	Instep Length	16.6	17.0	17.5	17.9	18.6	19.4	20.1	20.8	21.2	21.7	5.4
64	Foot Breadth	8.3	8.5	8.8	9.0	9.4	9.8	10.2	10.6	10.8	11.1	3.0
65	Heel Breadth	5.4	5.6	5.8	6.0	6.3	6.7	7.1	7.4	7.6	8.0	2.8
66	Ball of Foot Circumference	21.7	22.0	22.6	23.0	23.8	24.6	25.5	26.3	26.8	27.4	6.0

Mean Age - 24.28 years Number of men - 25,000

TABLE 3. STATISTICAL VALUES FOR U. S. ARMY MEN - 1966

No.	Measurements	N	Mean	SE(M)	S.D.	SE(SD)	V(%)	Values in Centimeters			Stature ratio
								Min.	Max.	Total	
1	Weight (kilograms)	6677	72.23	0.13	10.60	0.09	14.68	45.2	128.7	83.5	
STANDING MEASUREMENTS											
2	Stature	6682	174.52	0.08	6.61	0.06	3.79	151.8	199.7	47.9	1.000
3	Cervicale Height	6682	149.56	0.08	6.34	0.05	4.24	127.8	173.7	45.9	.857
4	Shoulder (Acromiale) Height	6682	143.72	0.08	6.22	0.05	4.33	123.2	167.2	44.0	.824
5	Waist (Iliocristale) Height	6682	106.33	0.07	5.37	0.05	5.05	86.2	126.2	40.0	.609
6	Crotch Height	6682	83.94	0.06	4.67	0.04	5.57	64.8	101.7	36.9	.481
7	Kneecap (Patella) Height	6682	52.86	0.04	3.25	0.03	6.14	42.8	64.2	21.4	.303
8	Calf Height	6682	35.42	0.03	2.70	0.02	7.62	23.8	47.7	23.9	.203
9	Functional (Thumb-Tip) Reach	6682	82.60	0.06	4.85	0.04	5.87	65.2	100.2	35.0	.473
SITTING MEASUREMENTS											
10	Vertical Reach, Sitting	6682	138.23	0.07	5.80	0.05	4.20	116.8	160.7	43.9	.792
11	Sitting Height	6682	90.69	0.04	3.66	0.03	4.04	77.2	103.2	26.0	.520
12	Eye Height, Sitting	6682	78.72	0.04	3.57	0.03	4.53	65.8	92.7	26.9	.451
13	Mid-Shoulder Height, Sitting	6682	62.38	0.04	3.18	0.03	5.09	50.8	73.2	22.4	.357
14	Shoulder-Elbow Length	6682	36.87	0.02	1.86	0.02	5.05	29.6	43.7	14.1	.211
15	Elbow-Fingertip Length	6682	47.96	0.03	2.31	0.02	4.81	39.2	57.6	18.4	.275
16	Knee Height, Sitting	6682	54.06	0.03	2.73	0.02	5.05	44.2	64.7	20.5	.310
17	Popliteal Height, Sitting	6682	44.61	0.03	2.50	0.02	5.60	35.8	54.5	18.7	.256
18	Buttock-Knee Length	6682	59.47	0.03	2.85	0.02	4.80	49.8	71.2	21.4	.341
19	Buttock-Popliteal Length	6682	49.82	0.03	2.50	0.02	5.02	41.2	58.7	17.5	.285
BREADTH MEASUREMENTS											
20	Chest Depth	6682	23.18	0.02	1.99	0.02	8.61	16.4	34.0	17.6	.133
21	Chest Breadth	6682	30.57	0.03	2.15	0.02	7.02	24.4	41.6	17.2	.175
22	Hip Breadth, Standing	6682	33.20	0.02	2.01	0.02	6.05	27.0	44.9	17.9	.190
23	Shoulder (Bideltoid) Breadth	6682	45.37	0.03	2.54	0.02	5.59	36.2	58.7	22.5	.260
24	Forearm-Forearm Breadth	6682	45.98	0.05	4.22	0.04	9.17	33.2	66.2	33.0	.263
25	Hip Breadth, Sitting	6682	34.16	0.03	2.38	0.02	6.97	26.2	50.2	24.0	.196

TABLE 3. STATISTICAL VALUES FOR U. S. ARMY MEN - 1966 (continued)

No.	Measurements	Values in Centimeters							Range		Stature ratio
		N	Mean	SE(M)	S.D.	SE(SD)	V(%)	Min.	Max.		
										Total	
CIRCUMFERENCES											
26	Neck Circumference	6681	37.39	0.03	2.07	0.02	5.53	30.2	48.6	18.4	.214
27	Shoulder Circumference	6682	113.16	0.08	6.39	0.06	5.64	92.8	145.2	52.4	.648
28	Chest Circumference	6682	93.77	0.08	6.69	0.06	7.13	71.8	124.2	52.4	.537
29	Waist Circumference	6682	80.29	0.10	8.18	0.07	10.19	58.8	127.7	68.9	.460
30	Hip (Buttock) Circumference	6682	94.21	0.08	6.25	0.05	6.63	77.2	124.2	57.0	.540
31	Vert. Trunk Circum., Standing	6682	164.11	0.10	8.49	0.07	5.17	135.2	199.7	64.5	.940
LIMB CIRCUMFERENCES											
32	Scye Circumference	6682	44.56	0.04	3.26	0.03	7.32	32.2	60.2	28.0	.255
33	Biceps Circum., Relaxed	6682	29.44	0.03	2.74	0.02	9.29	20.8	44.2	23.4	.169
34	Biceps Circum., Flexed	6682	32.27	0.03	2.75	0.02	8.52	22.8	45.2	22.4	.185
35	Forearm Circum., Flexed	6682	29.43	0.03	2.15	0.02	7.31	22.6	41.4	18.8	.169
36	Wrist Circumference	6682	17.06	0.01	0.88	0.01	5.13	13.6	21.6	8.0	.098
37	Upper Thigh Circumference	6682	55.42	0.06	4.80	0.04	8.66	38.8	77.7	38.9	.318
38	Lower Thigh Circumference	6682	40.36	0.05	3.87	0.03	9.58	28.8	56.7	27.9	.231
39	Calf Circumference	6682	36.60	0.03	2.67	0.02	7.29	28.2	50.7	22.5	.210
40	Ankle Circumference	6682	22.69	0.02	1.44	0.01	6.34	18.0	30.6	12.6	.130
SURFACE MEASUREMENTS											
41	Shoulder Length	6682	16.20	0.02	1.98	0.02	12.25	8.8	24.3	15.5	.093
42	Interscye, Back	6682	39.10	0.04	3.16	0.03	8.07	27.2	51.7	24.5	.224
43	Interscye, Maximum	6682	52.64	0.05	3.70	0.03	7.03	40.2	67.2	27.0	.302
44	Waist Back Length	6682	45.03	0.04	3.44	0.03	7.64	34.2	58.2	24.0	.258
45	Sleeve Inseam Length	6682	48.59	0.03	2.68	0.02	5.51	39.2	59.7	20.5	.278
46	Sleeve Length	6682	85.84	0.05	3.96	0.03	4.61	70.2	100.2	30.0	.492

TABLE 3. STATISTICAL VALUES FOR U. S. ARMY MEN - 1966 (continued)

No.	Measurements	N	Values in Centimeters						Range		Stature ratio
			Mean	SE(M)	S.D.	SE(SD)	V(%)	Min.	Max.	Total	
HEAD AND FACE MEASUREMENTS											
47	Head Circumference	6682	56.11	0.02	1.61	0.01	2.86	51.0	63.8	12.8	.322
48	Head Length	6682	19.47	0.01	0.73	0.01	3.77	16.6	22.4	5.8	.112
49	Sellion to back of head	6682	19.10	0.01	0.72	0.01	3.77	16.4	22.0	5.6	.109
50	Pronasale to back of head	6682	22.19	0.01	0.83	0.01	3.75	18.8	25.4	6.6	.127
51	Ectocanthus to back of head	6682	17.24	0.01	0.98	0.01	5.67	13.8	20.8	7.0	.099
52	Tragion to back of head	6682	10.28	0.01	1.19	0.01	11.58	6.8	14.6	7.8	.059
53	Head Breadth	6682	15.27	0.01	0.59	0.01	3.83	12.8	17.4	4.6	.088
54	Bitrignon Breadth	6682	13.50	0.01	0.56	0.00	4.18	11.4	15.6	4.2	.077
55	Head Height (Tragion-t. of h.)	6682	13.23	0.01	0.79	0.01	5.99	10.0	16.0	6.0	.076
56	Face Length (Menton-Sellion)	6681	12.03	0.01	0.66	0.01	5.50	9.6	14.6	5.0	.069
57	Face Breadth (Bizygomatic)	6681	13.99	0.01	0.56	0.00	4.00	12.0	16.3	4.3	.080
58	Interpupillary Breadth	6680	6.13	0.00	0.40	0.00	6.51	4.8	7.9	3.1	.035
HAND MEASUREMENTS											
59	Hand Length	6682	19.03	0.01	0.96	0.01	5.06	15.4	23.6	8.2	.109
60	Palm Length	6682	10.59	0.01	0.63	0.01	5.93	8.0	13.4	5.4	.061
61	Hand Breadth	6681	8.90	0.01	0.49	0.00	5.52	7.0	10.7	3.7	.051
62	Hand Circumference	6682	21.61	0.01	1.14	0.01	5.26	17.8	26.3	8.5	.124
63	Thumb Crotch Length	6682	4.97	0.01	0.52	0.00	10.45	3.2	7.5	4.3	.028
FOOT MEASUREMENTS											
64	Foot Length	6682	26.78	0.02	1.30	0.01	4.86	21.4	32.4	11.0	.153
65	Instep Length	6682	19.64	0.01	1.05	0.01	5.32	16.2	24.5	8.3	.113
66	Foot Breadth	6682	9.84	0.01	0.55	0.00	5.56	8.0	12.2	4.2	.056
67	Heel Breadth	6682	6.86	0.01	0.47	0.00	6.84	5.0	9.0	4.0	.039
68	Ball of Foot Circumference	6682	25.02	0.02	1.48	0.01	5.92	18.6	31.4	12.8	.143
69	Instep Circumference	6682	26.56	0.02	1.65	0.01	6.21	20.4	36.0	15.6	.152
70	Heel-Ankle Circumference	6682	34.11	0.02	1.66	0.01	4.86	28.2	40.7	12.5	.195
	Age (years)	6682	22.17	0.06	4.64	0.04	20.92	17.0	55.0	38.0	

TABLE 4. PERCENTILE VALUES FOR U. S. ARMY MEN - 1966

No.	Measurements	Percentiles in Centimeters										Range (1st-99th)	
		Median											
		1st	2nd	5th	10th	25th	50th	75th	90th	95th	98th		99th
STANDING MEASUREMENTS													
1	Weight (kilograms)	52.6	54.5	57.4	60.0	64.8	71.0	78.4	86.3	91.6	98.3	103.0	50.4
2	Stature	158.9	160.9	163.8	166.2	170.1	174.4	178.9	183.0	185.6	188.4	190.3	31.4
3	Cervicale Height	134.4	136.5	139.3	141.6	145.3	149.5	153.8	157.8	160.2	162.6	164.1	29.7
4	Shoulder (Acromiale) Height	129.3	131.1	133.6	135.8	139.5	143.6	147.8	151.8	154.1	156.8	158.6	29.3
5	Waist (Iliocristale) Height	93.6	95.1	97.5	99.5	102.8	106.4	109.9	113.1	115.2	117.5	119.2	25.6
6	Crotch Height	72.8	74.2	76.3	78.0	80.8	83.9	87.0	89.9	91.7	93.7	95.1	22.3
7	Kneecap (Patella) Height	45.5	46.4	47.6	48.7	50.6	52.8	55.0	57.1	58.4	59.8	60.7	15.2
8	Calf Height	29.3	30.0	31.1	32.0	33.6	35.4	37.2	38.9	40.0	41.2	41.9	12.6
9	Functional (Thumb-Tip) Reach	71.9	73.1	74.9	76.5	79.3	82.4	85.8	89.0	90.9	93.1	94.6	22.7
SITTING MEASUREMENTS													
10	Vertical Reach, Sitting	124.7	126.3	128.7	130.9	134.4	138.2	142.0	145.5	147.8	150.6	152.6	27.9
11	Sitting Height	82.0	83.0	84.5	85.9	88.2	90.8	93.2	95.4	96.7	98.2	99.2	17.2
12	Eye Height, Sitting	70.1	71.2	72.8	74.1	76.4	78.8	81.2	83.3	84.6	86.1	87.0	16.9
13	Mid-Shoulder Height, Sitting	54.5	55.6	57.1	58.4	60.3	62.4	64.5	66.5	67.6	68.9	69.7	15.2
14	Shoulder-Elbow Length	32.6	33.1	33.8	34.5	35.6	36.8	38.1	39.3	40.0	40.8	41.3	8.7
15	Elbow-Fingertip Length	42.7	43.4	44.3	45.1	46.4	47.9	49.4	51.0	51.9	53.0	53.8	11.1

TABLE 4. PERCENTILE VALUES FOR U. S. ARMY MEN - 1966 (continued)

No.	Measurements	Percentiles in Centimeters											Range (1st-99th)
		Median											
		1st	2nd	5th	10th	25th	50th	75th	90th	95th	98th	99th	
SITTING MEASUREMENTS (continued)													
16	Knee Height, Sitting	47.7	48.5	49.7	50.7	52.2	54.0	55.9	57.6	58.7	59.9	60.6	12.9
17	Popliteal Height, Sitting	38.8	39.6	40.6	41.5	42.9	44.5	46.3	47.9	48.8	49.8	50.4	11.6
18	Buttock-Knee Length	52.9	53.7	54.9	55.9	57.5	59.4	61.3	63.2	64.3	65.6	66.5	13.6
19	Buttock-Popliteal Length	44.0	44.7	45.8	46.6	48.1	49.8	51.5	53.1	54.0	55.1	55.8	11.8
BREATH MEASUREMENTS													
20	Chest Depth	19.2	19.6	20.2	20.8	21.8	23.0	24.4	25.8	26.7	27.9	28.8	9.6
21	Chest Breadth	26.1	26.6	27.3	28.0	29.1	30.4	31.9	33.4	34.4	35.5	36.4	10.3
22	Hip Breadth, Standing	29.1	29.5	30.2	30.8	31.8	33.0	34.4	35.8	36.7	37.8	38.6	9.5
23	Shoulder (Bideloid) Breadth	40.0	40.6	41.5	42.3	43.6	45.2	47.0	48.6	49.8	51.1	52.1	12.1
24	Forearm-Forearm Breadth	37.9	38.6	39.8	40.9	43.0	45.6	48.6	51.6	53.6	55.9	57.6	19.7
25	Hip Breadth, Sitting	29.5	30.0	30.7	31.4	32.5	33.9	35.6	37.3	38.4	39.8	40.7	11.2
CIRCUMFERENCES													
26	Neck Circumference	33.0	33.5	34.2	34.8	35.9	37.3	38.7	40.1	41.0	42.0	42.6	9.6
27	Shoulder Circumference	99.8	101.2	103.3	105.3	108.8	112.8	117.1	121.4	124.2	127.7	130.2	30.4
28	Chest Circumference	80.9	82.2	84.1	85.9	89.1	93.0	97.7	102.6	105.9	109.9	112.8	31.9
29	Waist Circumference	66.3	67.7	69.7	71.3	74.5	78.9	84.7	91.4	95.9	101.6	105.6	39.3

TABLE 4. PERCENTILE VALUES FOR U. S. ARMY MEN - 1966 (continued)

No.	Measurements	Percentiles in Centimeters										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		
CIRCUMFERENCES (continued)													
30	Hip (Buttock) Circumference	82.0	83.3	85.1	86.8	89.8	93.6	97.9	102.5	105.5	109.3	112.0	30.0
31	Vert. Trunk Circum., Stand.	145.4	147.5	150.6	153.5	158.3	163.8	169.5	175.1	178.6	182.9	185.9	40.5
LMB CIRCUMFERENCES													
32	Scye Circumference	37.7	38.4	39.6	40.6	42.3	44.3	46.5	48.7	50.3	52.3	53.8	16.1
33	Biceps Circum., Relaxed	23.9	24.4	25.3	26.1	27.5	29.2	31.2	33.1	34.2	35.6	36.6	12.7
34	Biceps Circum., Flexed	26.5	27.1	28.0	28.9	30.4	32.1	34.0	35.9	37.0	38.4	39.4	12.9
35	Forearm Circum., Flexed	24.8	25.3	26.1	26.8	28.0	29.3	30.8	32.2	33.1	34.3	35.1	10.3
36	Wrist Circumference	15.1	15.3	15.7	16.0	16.5	17.0	17.6	18.2	18.6	19.0	19.3	4.2
37	Upper Thigh Circumference	45.5	46.5	48.1	49.5	52.0	55.1	58.5	61.8	63.9	66.1	67.6	22.1
38	Lower Thigh Circumference	32.7	33.4	34.4	35.5	37.5	40.1	43.0	45.6	47.2	48.9	49.9	17.2
39	Calf Circumference	30.8	31.4	32.4	33.2	34.7	36.5	38.3	40.1	41.2	42.5	43.4	12.6
40	Ankle Circumference	19.7	20.0	20.5	20.9	21.7	22.6	23.6	24.6	25.2	25.9	26.4	6.7
SURFACE MEASUREMENTS													
41	Shoulder Length	11.2	11.8	12.7	13.5	14.9	16.3	17.6	18.6	19.2	20.0	20.5	9.3
42	Interscye, Back	31.9	32.7	33.9	35.1	37.0	39.1	41.1	43.0	44.2	45.7	46.7	14.8
43	Interscye, Maximum	43.7	44.8	46.4	47.9	50.1	52.6	55.0	57.3	58.7	60.4	61.6	17.9

TABLE 4. PERCENTILE VALUES FOR U. S. ARMY MEN - 1966 (continued)

No.	Measurements	Percentiles in Centimeters										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		99th
SURFACE MEASUREMENTS (continued)													
44	Waist Back Length	37.5	38.3	39.5	40.6	42.6	44.9	47.3	49.6	50.8	52.2	53.0	15.5
45	Sleeve Inseam Length	42.3	43.0	44.2	45.2	46.8	48.6	50.3	52.0	53.0	54.2	55.1	12.8
46	Sleeve Length	76.6	77.8	79.4	80.8	83.2	85.7	88.4	90.9	92.4	94.2	95.3	18.7
HEAD AND FACE MEASUREMENTS													
47	Head Circumference	52.4	52.9	53.5	54.1	55.0	56.1	57.2	58.2	58.8	59.5	60.0	7.6
48	Head Length	17.8	18.0	18.2	18.5	19.0	19.5	20.0	20.4	20.7	21.0	21.2	3.4
49	Sellion to back of head	17.4	17.6	17.9	18.2	18.6	19.1	19.6	20.0	20.3	20.6	20.8	3.4
50	Pronasale to back of head	20.2	20.4	20.8	21.1	21.6	22.2	22.8	23.2	23.5	23.9	24.1	3.9
51	Ectocanthus to back of head	15.1	15.3	15.7	16.0	16.6	17.2	17.9	18.6	18.9	19.3	19.4	4.3
52	Tragion to back of head	7.9	8.1	8.5	8.8	9.4	10.2	11.1	11.9	12.4	12.7	12.9	5.0
53	Head Breadth	13.9	14.1	14.3	14.6	14.9	15.2	15.6	16.0	16.3	16.5	16.7	2.8
54	Bitracion Breadth	12.2	12.4	12.6	12.8	13.1	13.5	13.9	14.2	14.4	14.7	14.8	2.6
55	Head Height (Trag.-t. of h.)	11.3	11.6	11.9	12.2	12.7	13.2	13.8	14.2	14.5	14.8	15.0	3.7
56	Face Length (Menton-Sellion)	10.5	10.7	11.0	11.2	11.6	12.0	12.5	12.9	13.1	13.4	13.6	3.1
57	Face Breadth (Bizygomatic)	12.7	12.9	13.1	13.3	13.6	14.0	14.4	14.7	14.9	15.2	15.4	2.7
58	Interpupillary Breadth	5.2	5.3	5.5	5.6	5.9	6.1	6.4	6.6	6.8	7.0	7.1	1.9

TABLE 4. PERCENTILE VALUES FOR U. S. ARMY MEN - 1966 (continued)

No.	Measurements	Percentiles in Centimeters										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		
HAND MEASUREMENTS													
59	Hand Length	16.9	17.2	17.5	17.8	18.4	19.0	19.6	20.3	20.7	21.1	21.4	4.5
60	Palm Length	9.2	9.3	9.6	9.8	10.2	10.6	11.0	11.4	11.7	12.0	12.2	3.0
61	Hand Breadth	7.8	7.9	8.1	8.3	8.6	8.9	9.2	9.5	9.7	10.0	10.1	2.3
62	Hand Circumference	19.1	19.4	19.8	20.2	20.8	21.6	22.3	23.1	23.6	24.1	24.5	5.4
63	Thumb Crotch Length	3.8	3.9	4.1	4.3	4.6	5.0	5.3	5.6	5.8	6.1	6.2	2.4
FOOT MEASUREMENTS													
64	Foot Length	23.8	24.2	24.7	25.1	25.9	26.7	27.6	28.4	29.0	29.6	30.0	6.2
65	Instep Length	17.2	17.5	17.9	18.3	18.9	19.6	20.3	21.0	21.4	21.9	22.3	5.1
66	Foot Breadth	8.6	8.8	9.0	9.2	9.5	9.8	10.2	10.6	10.8	11.0	11.2	2.6
67	Heel Breadth	5.9	6.0	6.2	6.3	6.5	6.8	7.2	7.5	7.7	7.9	8.1	2.2
68	Ball of Foot Circumference	21.3	21.8	22.5	23.1	24.1	25.1	26.0	26.9	27.4	28.0	28.4	7.1
69	Instep Circumference	22.8	23.3	24.0	24.5	25.4	26.5	27.6	28.7	29.4	30.1	30.6	7.8
70	Heel-Ankle Circumference	30.3	30.8	31.4	32.0	33.0	34.1	35.2	36.3	36.9	37.7	38.2	7.9
Age (years)													
		17.4	17.7	18.6	19.1	19.6	20.6	23.0	27.4	31.5	37.7	43.0	25.6

Mean Age - 22.17 years Number of men - 6682

TABLE 5. STATISTICAL VALUES FOR U. S. ARMY MEN (BASIC TRAINEES) - 1966

No.	Measurements	Values in Centimeters							Stature ratio
		N	Mean	SE(M)	S.D.	SE(SD)	V(%)	Range Min. Max.	
1	Weight (kilograms)	2638	70.74	0.20	10.47	0.14	14.81	45.2 115.9	70.7
STANDING MEASUREMENTS									
2	Stature	2639	174.69	0.13	6.45	0.09	3.69	152.8 196.7	43.9
3	Cervicale Height	2639	149.44	0.12	6.17	0.08	4.13	127.8 171.7	43.9
4	Shoulder (Acromiale) Height	2639	143.68	0.12	6.07	0.08	4.22	124.2 163.2	39.0
5	Waist (Iliocristale) Height	2639	106.65	0.10	5.14	0.07	4.82	88.2 125.2	37.0
6	Crotch Height	2639	84.41	0.09	4.57	0.06	5.41	65.8 100.7	34.9
7	Kneecap (Patella) Height	2639	53.00	0.06	3.14	0.04	5.93	42.8 64.2	21.4
8	Calf Height	2639	35.45	0.05	2.53	0.03	7.14	23.8 44.7	20.9
9	Functional (Thumb-Tip Reach)	2638	82.25	0.09	4.65	0.06	5.66	65.2 100.2	35.0
SITTING MEASUREMENTS									
10	Vertical Reach, Sitting	2639	138.80	0.11	5.57	0.08	4.01	116.8 158.7	41.9
11	Sitting Height	2639	91.22	0.07	3.44	0.05	3.77	79.2 103.2	24.0
12	Eye Height, Sitting	2639	79.12	0.07	3.39	0.05	4.29	66.8 90.7	23.9
13	Mid-Shoulder Height, Sitting	2639	62.70	0.06	2.93	0.04	4.68	52.2 73.2	21.0
14	Shoulder-Elbow Length	2639	36.78	0.04	1.81	0.02	4.92	30.8 43.4	12.6
15	Elbow-Fingertip Length	2639	47.94	0.04	2.19	0.03	4.57	40.4 56.4	16.0
16	Knee Height, Sitting	2639	54.02	0.05	2.63	0.04	4.87	46.2 64.2	18.0
17	Popliteal Height, Sitting	2639	44.78	0.05	2.49	0.03	5.56	36.6 53.3	16.7
18	Buttock-Knee Length	2639	59.24	0.05	2.77	0.04	4.68	50.2 70.2	20.0
19	Buttock-Popliteal Length	2639	49.51	0.05	2.52	0.03	5.09	42.0 58.7	16.7
BREADTH MEASUREMENTS									
20	Chest Depth	2639	22.76	0.04	1.88	0.03	8.24	16.8 30.0	13.2
21	Chest Breadth	2639	30.45	0.04	2.12	0.03	6.95	24.4 39.2	14.8
22	Hip Breadth, Standing	2639	33.05	0.04	1.98	0.03	6.00	27.2 44.8	17.6
23	Shoulder (Bideloid) Breadth	2639	45.08	0.05	2.47	0.03	5.48	36.2 54.2	18.0
24	Forearm-Forearm Breadth	2639	45.17	0.08	4.08	0.06	9.03	33.2 64.2	31.0
25	Hip Breadth, Sitting	2639	33.92	0.05	2.36	0.03	6.95	27.8 47.7	19.9

TABLE 5. STATISTICAL VALUES FOR U. S. ARMY MEN (BASIC TRAINEES) - 1966 (continued)

Values in Centimeters										
No.	Measurements	N	Mean	SE(M)	S.D.	SE(SD)	V(%)	Range		Stature ratio
								Min.	Max.	
CIRCUMFERENCES										
26	Neck Circumference	2639	37.13	0.04	2.03	0.03	5.46	30.2	48.6	.213
27	Shoulder Circumference	2639	112.30	0.12	6.35	0.09	5.66	92.4	139.2	.643
28	Chest Circumference	2639	92.79	0.13	6.46	0.09	6.97	71.8	122.7	.531
29	Waist Circumference	2639	79.59	0.16	8.08	0.11	10.15	58.8	117.2	.456
30	Hip (Buttock) Circumference	2639	93.45	0.12	6.37	0.09	6.81	77.2	125.2	.535
31	Vert. Trunk Circum., Standing	2639	164.69	0.16	8.47	0.12	5.14	136.8	196.7	.943
LIMB CIRCUMFERENCES										
32	Scye Circumference	2639	44.40	0.06	3.11	0.04	7.00	34.2	58.2	.254
33	Biceps Circum., Relaxed	2639	29.01	0.05	2.77	0.04	9.53	20.8	38.7	.166
34	Biceps Circum., Flexed	2639	31.81	0.05	2.75	0.04	8.63	22.8	43.7	.182
35	Forearm Circum., Flexed	2639	29.22	0.04	2.04	0.03	6.99	22.6	37.4	.167
36	Wrist Circumference	2639	17.08	0.02	0.85	0.01	4.99	14.6	20.6	.098
37	Upper Thigh Circumference	2639	54.57	0.10	4.95	0.07	9.06	40.8	75.7	.312
38	Lower Thigh Circumference	2639	39.38	0.07	3.78	0.05	9.61	28.8	52.7	.225
39	Calf Circumference	2639	36.28	0.05	2.74	0.04	7.56	28.2	45.7	.208
40	Ankle Circumference	2639	22.71	0.03	1.43	0.02	6.29	18.0	27.9	.130
SURFACE MEASUREMENTS										
41	Shoulder Length	2639	15.78	0.04	1.87	0.03	11.83	9.6	22.7	.090
42	Interscye, Back	2639	38.93	0.06	3.12	0.04	8.00	27.8	50.7	.223
43	Interscye, Maximum	2639	52.41	0.07	3.47	0.05	6.61	40.8	65.7	.300
44	Waist Back Length	2639	44.67	0.06	3.26	0.04	7.30	33.8	57.7	.256
45	Sleeve Inseam Length	2639	48.61	0.05	2.57	0.04	5.30	40.2	59.7	.278
46	Sleeve Length	2639	85.75	0.07	3.76	0.05	4.38	72.2	100.2	.491

TABLE 5. STATISTICAL VALUES FOR U. S. ARMY MEN (BASIC TRAINEES) - 1966 (continued)

No.	Measurements	N	Values in Centimeters						Range		Stature ratio
			Mean	SE(M)	S.D.	SE(SD)	V(%)	Min.	Max.	Total	
HEAD AND FACE MEASUREMENTS											
47	Head Circumference	2639	55.90	0.03	1.56	0.02	2.79	51.0	61.7	10.7	.320
48	Head Length	2639	19.41	0.01	0.72	0.01	3.69	16.6	21.8	5.2	.111
49	Sellion to back of head	2639	19.06	0.01	0.71	0.01	3.73	16.6	21.4	4.8	.109
50	Pronasale to back of head	2639	22.17	0.02	0.83	0.01	3.74	18.8	25.4	6.6	.127
51	Ectocanthus to back of head	2639	17.02	0.02	0.90	0.01	5.26	13.8	20.2	6.4	.097
52	Tragion to back of head	2639	10.13	0.02	1.15	0.02	11.39	6.8	13.6	6.8	.058
53	Head Breadth	2639	15.27	0.01	0.57	0.01	3.70	13.2	17.4	4.2	.087
54	Bitragion Breadth	2639	13.46	0.01	0.55	0.01	4.10	11.8	15.5	3.7	.077
55	Head Height (Tragion-t. of h.)	2639	13.25	0.02	0.79	0.01	5.99	10.0	15.8	5.8	.076
56	Face Length (Menton-Sellion)	2639	11.98	0.01	0.66	0.01	5.49	9.6	14.6	5.0	.069
57	Face Breadth (Bizygomatic)	2638	13.94	0.01	0.54	0.01	3.90	12.2	15.7	3.5	.080
58	Interpillary Breadth	2638	6.10	0.01	0.41	0.01	6.69	4.8	7.7	2.9	.035
HAND MEASUREMENTS											
59	Hand Length	2639	19.05	0.02	0.91	0.01	4.79	16.4	23.5	7.1	.109
60	Palm Length	2639	10.62	0.01	0.61	0.01	5.76	8.0	13.0	5.0	.061
61	Hand Breadth	2639	8.88	0.01	0.46	0.01	5.18	7.2	10.7	3.5	.051
62	Hand Circumference	2639	21.60	0.02	1.12	0.02	5.19	18.2	26.1	7.9	.124
63	Thumb Crotch Length	2639	4.95	0.01	0.50	0.01	10.00	3.4	6.9	3.5	.028
FOOT MEASUREMENTS											
64	Foot Length	2639	26.85	0.02	1.26	0.02	4.70	22.2	31.8	9.6	.154
65	Instep Length	2639	19.66	0.02	1.00	0.01	5.11	16.4	23.5	7.1	.113
66	Foot Breadth	2639	9.92	0.01	0.54	0.01	5.48	8.2	11.9	3.7	.057
67	Heel Breadth	2639	6.84	0.01	0.45	0.01	6.56	5.2	9.0	3.8	.039
68	Ball of Foot Circumference	2639	25.18	0.03	1.42	0.02	5.65	19.8	30.2	10.4	.144
69	Instep Circumference	2639	26.83	0.03	1.65	0.02	6.13	20.8	32.4	11.6	.154
70	Heel-Ankle Circumference	2639	34.08	0.03	1.63	0.02	4.78	28.8	40.4	11.6	.195
	Age (years)	2639	20.18	0.03	1.48	0.02	7.35	17.0	31.0	14.0	

TABLE 6. PERCENTILE VALUES FOR U. S. ARMY MEN (BASIC TRAINEES) - 1966

No.	Measurements	Percentiles in Centimeters										Range 99th (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		
STANDING MEASUREMENTS													
1	Weight (kilograms)	50.8	53.0	56.1	58.7	63.3	69.4	77.0	85.1	90.3	96.2	100.0	49.2
2	Stature	159.7	161.6	164.2	166.5	170.3	174.6	179.0	183.0	185.5	188.4	190.2	30.5
3	Cervicale Height	134.8	136.7	139.4	141.7	145.3	149.4	153.6	157.5	159.8	162.1	163.5	28.7
4	Shoulder (Acromiale) Height	129.8	131.4	133.7	135.9	139.6	143.6	147.7	151.5	153.8	156.4	158.2	28.4
5	Waist (Iliocristale) Height	95.0	96.2	98.2	100.0	103.2	106.7	110.1	113.2	115.2	117.5	119.2	24.2
6	Crotch Height	73.7	75.0	77.0	78.7	81.4	84.4	87.4	90.3	92.0	94.0	95.4	21.7
7	Kneecap (Patella) Height	45.9	46.7	47.9	49.0	50.8	53.0	55.1	57.1	58.2	59.6	60.5	14.6
8	Calf Height	30.0	30.6	31.5	32.3	33.7	35.4	37.1	38.8	39.8	40.9	41.7	11.7
9	Functional (Thumb-Tip) Reach	71.7	72.9	74.7	76.4	79.1	82.2	85.3	88.2	90.1	92.3	93.8	22.1
SITTING MEASUREMENTS													
10	Vertical Reach, Sitting	125.8	127.3	129.6	131.7	135.1	138.8	142.4	145.8	148.0	150.7	152.7	26.9
11	Sitting Height	82.8	83.9	85.5	86.8	88.9	91.2	93.5	95.6	96.9	98.4	99.4	16.6
12	Eye Height, Sitting	71.2	72.1	73.4	74.7	76.8	79.2	81.4	83.5	84.7	86.2	87.2	16.0
13	Mid-Shoulder Height, Sitting	55.8	56.7	58.0	59.0	60.7	62.7	64.6	66.5	67.6	68.9	69.7	13.9
14	Shoulder-Elbow Length	32.7	33.1	33.8	34.4	35.6	36.8	38.0	39.1	39.8	40.6	41.2	8.5
15	Elbow-Fingertip Length	42.8	43.4	44.4	45.2	46.5	47.9	49.4	50.7	51.6	52.6	53.3	10.5

TABLE 6. PERCENTILE VALUES FOR U. S. ARMY MEN (BASIC TRAINEES) - 1966 (continued)

No.	Measurements	Percentiles in Centimeters										Range 99th (1st-99th)	
		Median											
		1st	2nd	5th	10th	25th	50th	75th	90th	95th	98th		
SITTING MEASUREMENTS (continued)													
16	Knee Height, Sitting	48.0	48.8	49.8	50.8	52.2	53.9	55.8	57.5	58.6	59.7	60.4	12.4
17	Popliteal Height, Sitting	39.1	39.8	40.7	41.6	43.0	44.7	46.5	48.0	49.0	50.0	50.6	11.5
18	Buttock-Knee Length	53.2	53.8	54.8	55.7	57.3	59.2	61.1	62.8	63.9	65.3	66.2	13.0
19	Buttock-Popliteal Length	43.7	44.4	45.4	46.3	47.8	49.5	51.2	52.8	53.7	54.9	55.6	11.9
BREADTH MEASUREMENTS													
20	Chest Depth	18.9	19.3	19.9	20.5	21.4	22.6	23.9	25.2	26.1	27.1	27.9	9.0
21	Chest Breadth	26.0	26.5	27.2	27.8	29.0	30.3	31.8	33.2	34.1	35.3	36.1	10.1
22	Hip Breadth, Standing	29.0	29.4	30.0	30.6	31.7	32.9	34.3	35.6	36.5	37.6	38.4	9.4
23	Shoulder (Bideltoïd) Breadth	39.6	40.3	41.2	42.0	43.4	45.0	46.7	48.3	49.4	50.5	51.2	11.6
24	Forearm-Forearm Breadth	37.3	38.1	39.2	40.3	42.2	44.8	47.8	50.7	52.6	54.6	55.8	18.5
25	Hip Breadth, Sitting	29.2	29.7	30.4	31.1	32.2	33.7	35.4	37.1	38.2	39.4	40.1	10.9
CIRCUMFERENCES													
26	Neck Circumference	32.6	33.2	34.0	34.6	35.7	37.0	38.4	39.8	40.6	41.5	42.1	9.5
27	Shoulder Circumference	98.9	100.4	102.5	104.4	107.8	111.9	116.4	120.8	123.5	126.6	128.7	29.8
28	Chest Circumference	80.0	81.3	83.2	85.0	88.2	92.2	96.7	101.4	104.5	108.2	110.8	30.8
29	Waist Circumference	65.5	67.3	69.4	70.9	73.7	78.0	84.2	91.0	95.5	100.5	103.6	38.1

TABLE 6. PERCENTILE VALUES FOR U. S. ARMY MEN (BASIC TRAINEES) - 1966 (continued)

No.	Measurements	Percentiles in Centimeters										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		99th
CIRCUMFERENCES (continued)													
30	Hip (Buttock) Circumference	81.0	82.4	84.3	85.9	88.9	92.7	97.4	102.2	105.2	108.7	110.9	29.9
31	Vert. Trunk Circum., Stand.	145.0	147.4	151.0	154.0	159.0	164.5	170.1	175.5	179.0	183.1	186.2	41.2
Limb CIRCUMFERENCES													
32	Scye Circumference	38.0	38.7	39.7	40.6	42.2	44.2	46.3	48.5	49.9	51.6	52.8	14.8
33	Biceps Circum., Relaxed	23.4	24.0	24.9	25.6	27.0	28.8	30.8	32.8	34.0	35.2	36.0	12.6
34	Biceps Circum., Flexed	26.1	26.7	27.6	28.4	29.9	31.7	33.6	35.5	36.6	38.0	38.8	12.7
35	Forearm Circum., Flexed	24.8	25.3	26.0	26.6	27.8	29.1	30.6	31.9	32.7	33.6	34.2	9.4
36	Wrist Circumference	15.2	15.4	15.8	16.0	16.5	17.0	17.6	18.2	18.6	19.0	19.4	4.2
37	Upper Thigh Circumference	44.8	45.8	47.2	48.6	51.0	54.1	57.8	61.3	63.4	65.7	67.0	22.2
38	Lower Thigh Circumference	32.0	32.8	33.9	34.8	36.6	39.0	41.8	44.6	46.3	48.1	49.2	17.2
39	Calf Circumference	30.4	31.1	32.0	32.9	34.3	36.1	38.0	39.9	41.1	42.4	43.2	12.8
40	Ankle Circumference	19.7	20.0	20.5	20.9	21.7	22.6	23.6	24.6	25.2	25.9	26.4	6.7
SURFACE MEASUREMENTS													
41	Shoulder Length	11.3	11.6	12.4	13.2	14.6	16.0	17.1	18.0	18.6	19.5	20.2	8.9
42	Interscye, Back	31.9	32.6	33.8	34.9	36.8	38.9	41.0	42.9	44.0	45.3	46.1	14.2
43	Interscye, Maximum	44.4	45.4	46.8	48.1	50.1	52.3	54.7	56.9	58.3	59.9	60.9	16.5

TABLE 6. PERCENTILE VALUES FOR U. S. ARMY MEN (BASIC TRAINEES) - 1966 (continued)

No.	Measurements	Percentiles in Centimeters										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		99th
SURFACE MEASUREMENTS (continued)													
44	Waist Back Length	37.5	38.2	39.4	40.4	42.4	44.6	46.9	49.0	50.2	51.4	52.2	14.7
45	Sleeve Inseam Length	42.8	43.4	44.3	45.2	46.8	48.6	50.3	51.8	52.8	54.1	55.0	12.2
46	Sleeve Length	77.2	78.2	79.6	80.9	83.1	85.7	88.2	90.6	92.0	93.7	94.8	17.6
HEAD AND FACE MEASUREMENTS													
47	Head Circumference	52.2	52.7	53.4	53.9	54.9	55.9	56.9	57.9	58.5	59.2	59.7	7.5
48	Head Length	17.7	17.9	18.2	18.5	18.9	19.4	19.9	20.3	20.6	20.9	21.1	3.4
49	Sellion to back of head	17.4	17.6	17.9	18.1	18.6	19.1	19.5	20.0	20.2	20.5	20.8	3.4
50	Pronasale to back of head	20.2	20.4	20.8	21.1	21.6	22.2	22.7	23.2	23.5	23.8	24.1	3.9
51	Ectocanthus to back of head	15.0	15.3	15.6	15.9	16.4	17.0	17.6	18.2	18.6	19.0	19.2	4.2
52	Tragion to back of head	7.8	8.1	8.4	8.7	9.3	10.0	10.9	11.7	12.2	12.6	12.8	5.0
53	Head Breadth	14.0	14.1	14.4	14.6	14.9	15.3	15.6	16.0	16.2	16.5	16.7	2.7
54	Bitragion Breadth	12.2	12.3	12.6	12.8	13.1	13.5	13.8	14.2	14.4	14.6	14.8	2.6
55	Head Height (Trag.-t. of h.)	11.3	11.5	11.9	12.2	12.7	13.3	13.8	14.2	14.5	14.8	15.0	3.7
56	Face Length (Menton-Sellion)	10.5	10.7	10.9	11.2	11.5	12.0	12.4	12.8	13.1	13.4	13.6	3.1
57	Face Breadth (Bizygomatic)	12.7	12.8	13.1	13.3	13.6	13.9	14.3	14.6	14.9	15.1	15.3	2.6
58	Intercupillary Breadth	5.2	5.3	5.4	5.6	5.8	6.1	6.4	6.6	6.8	7.0	7.1	1.9

TABLE 6. PERCENTILE VALUES FOR U. S. ARMY MEN (BASIC TRAINEES) - 1966 (continued)

No.	Measurements	Percentiles in Centimeters										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		99th
HAND MEASUREMENTS													
59	Hand Length	17.0	17.2	17.6	17.9	18.4	19.0	19.7	20.2	20.6	21.0	21.3	4.3
60	Palm Length	9.2	9.4	9.6	9.8	10.2	10.6	11.0	11.4	11.7	11.9	12.1	2.9
61	Hand Breadth	7.9	8.0	8.2	8.3	8.6	8.9	9.2	9.5	9.7	9.9	10.0	2.1
62	Hand Circumference	19.2	19.5	19.9	20.2	20.8	21.5	22.3	23.1	23.6	24.1	24.4	5.2
63	Thumb Crotch Length	3.8	3.9	4.2	4.3	4.6	5.0	5.3	5.6	5.8	6.0	6.1	2.3
FOOT MEASUREMENTS													
64	Foot Length	24.0	24.3	24.8	25.2	26.0	26.8	27.7	28.4	29.0	29.6	30.1	6.1
65	Instep Length	17.3	17.6	18.0	18.4	19.0	19.6	20.3	20.9	21.3	21.8	22.2	4.9
66	Foot Breadth	8.8	8.9	9.1	9.2	9.6	9.9	10.3	10.6	10.8	11.1	11.3	2.5
67	Heel Breadth	5.9	6.0	6.2	6.3	6.5	6.8	7.1	7.4	7.6	7.8	8.0	2.1
68	Ball of Foot Circumference	21.6	22.1	22.8	23.4	24.2	25.2	26.1	27.0	27.5	28.1	28.4	6.8
69	Instep Circumference	23.1	23.5	24.1	24.7	25.7	26.8	27.9	29.0	29.6	30.3	30.7	7.6
70	Heel-Ankle Circumference	30.3	30.8	31.4	32.0	33.0	34.0	35.1	36.2	36.8	37.6	38.1	7.8
Age (years)													
		17.0	17.5	18.1	18.6	19.2	20.0	20.9	22.1	23.0	24.3	25.3	8.3

Mean Age - 20.18 years Number of men - 2639

TABLE 7. STATISTICAL VALUES FOR U. S. ARMY MEN (BASIC TRAINEES) - 1977

No.	Measurements	N	Values in Centimeters					Range		Stature ratio
			SE(M)	S.D.	SE(SD)	V(%)	Min.	Max.	Total	
1	Weight (kilograms)	287	0.65	10.98	0.46	15.52	46.5	106.0	59.5	
STANDING MEASUREMENTS										
2	Stature	287	0.40	6.82	0.28	3.92	153.0	197.4	44.4	1.000
3	Axilla Height	287	0.35	5.89	0.25	4.49	113.3	149.7	36.4	.754
4	Suprasternale Height	287	0.36	6.09	0.25	4.26	124.6	162.7	38.1	.820
5	Chest (Nipple) Height	287	0.33	5.67	0.24	4.45	110.3	146.6	36.3	.732
6	Substernale Height	287	0.32	5.49	0.23	4.48	103.8	140.2	36.4	.704
7	Elbow (Radiale) Height	287	0.30	5.05	0.21	4.62	94.5	126.4	31.9	.628
8	Knuckle Height (Metacarp. III)	287	0.24	4.11	0.17	5.45	62.4	89.5	27.1	.434
9	Waist Height (Natural)	287	0.34	5.75	0.24	5.52	90.6	119.1	28.5	.598
10	Waist Height (Omphalion)	287	0.31	5.27	0.22	4.99	89.5	119.9	30.4	.606
11	Buttock Height	287	0.30	5.07	0.21	5.67	75.5	105.4	29.9	.514
12	Gluteal Furrow Height	287	0.26	4.42	0.18	5.50	66.1	94.6	28.5	.462
13	Tibiale Height	283	0.16	2.77	0.12	5.73	40.4	55.8	15.4	.278
14	Acromion-Radiale Length	287	0.11	1.82	0.08	5.40	27.9	39.3	11.4	.194
15	Radiale-Stylelion Length	287	0.09	1.57	0.07	5.87	21.6	31.5	9.9	.154
SITTING MEASUREMENTS										
16	Sitting Height	287	0.21	3.63	0.15	4.07	78.1	100.2	22.1	.513
17	Eye Height, Sitting	287	0.20	3.39	0.14	4.38	66.8	86.7	19.9	.445
18	Mid-Shoulder Height, Sitting	287	0.18	3.03	0.13	4.93	52.8	69.2	16.4	.353
19	Shoulder-Elbow Length	287	0.11	1.85	0.08	5.10	31.2	41.8	10.6	.209
20	Elbow-Grip Length	287	0.12	1.96	0.08	5.61	28.3	40.8	12.5	.201
21	Elbow-Fingertip Length	287	0.15	2.47	0.10	5.17	40.0	54.6	14.6	.274
22	Knee Height, Sitting	287	0.18	3.02	0.13	5.49	46.5	63.2	16.7	.317
23	Popliteal Height, Sitting	287	0.16	2.72	0.11	6.14	37.0	52.0	15.0	.254
24	Buttock-Knee Length	287	0.18	3.07	0.13	5.06	52.4	70.3	17.9	.349

TABLE 7. STATISTICAL VALUES FOR U. S. ARMY MEN (BASIC TRAINEES) - 1977 (continued)

No.	Measurements	N	Mean	SE(M)	Values in Centimeters					Stature ratio	
					S.D.	SE(SD)	V(%)	Range			
								Min.	Max.		Total
DEPTH AND BREADTH MEASUREMENTS											
25	Chest Depth	287	21.68	0.12	2.00	0.08	9.21	17.5	27.2	9.7	.125
26	Waist Depth	280	20.29	0.13	2.25	0.10	11.11	16.0	28.8	12.8	.117
27	Biacromial Breadth	287	39.46	0.12	1.98	0.08	5.02	33.6	44.9	11.3	.227
CIRCUMFERENCES											
28	Shoulder Circumference	287	110.92	0.36	6.14	0.26	5.54	95.3	130.1	34.8	.637
29	Chest Circumference	287	92.90	0.39	6.60	0.28	7.11	78.7	111.2	32.5	.534
30	Waist Circumference (Natural)	287	78.68	0.47	8.04	0.34	10.22	63.4	108.2	44.8	.452
31	Waist Circumference (Omphalion)	287	78.87	0.49	8.29	0.35	10.52	63.4	108.2	44.8	.453
32	Hip (Buttock) Circumference	287	95.14	0.36	6.04	0.25	6.35	83.8	113.8	30.0	.547
LIMB CIRCUMFERENCES											
33	Biceps Circum., Relaxed	287	29.16	0.16	2.77	0.12	9.49	22.0	38.1	16.1	.168
34	Biceps Circum., Flexed	287	31.38	0.16	2.71	0.11	8.65	23.8	39.0	15.2	.180
35	Calf Circumference	287	35.83	0.17	2.80	0.12	7.81	28.5	44.0	15.5	.206
36	Ankle Circumference	287	21.71	0.08	1.42	0.06	6.56	18.0	26.0	8.0	.125
SURFACE MEASUREMENTS											
37	Interscye, Back	287	41.02	0.17	2.81	0.12	6.85	33.2	48.1	14.9	.236
38	Interscye, Front	287	36.67	0.12	1.96	0.08	5.34	31.7	41.3	9.6	.211
39	Back Curvature - Chest Level	287	45.17	0.20	3.37	0.14	7.46	37.8	54.7	16.9	.259
40	Back Curvature - Waist Level	287	38.96	0.25	4.28	0.18	10.98	31.1	57.3	26.2	.224
41	Back Curvature - Hip Level	287	46.57	0.18	3.13	0.13	6.72	39.5	58.4	18.9	.268

TABLE 7. STATISTICAL VALUES FOR U. S. ARMY MEN (BASIC TRAINEES) - 1977 (continued)

No.	Measurements	N	Values in Centimeters						Range		Stature ratio
			Mean	SE(M)	S.D.	SE(SD)	V(%)	Min.	Max.	Total	
SURFACE MEASUREMENTS (continued)											
42	Waist Back Length	287	44.90	0.19	3.20	0.13	7.13	37.7	53.0	15.3	.258
43	Waist Front Length	287	41.05	0.18	3.03	0.13	7.38	32.6	49.0	16.4	.236
44	Sleeve Inseam Length	287	48.26	0.16	2.73	0.11	5.65	38.9	56.3	17.4	.277
45	Sleeve Outseam Length	287	58.77	0.19	3.23	0.13	5.49	47.3	66.9	19.6	.338
HEAD AND FACE MEASUREMENTS											
46	Head Circumference	287	56.01	0.10	1.63	0.07	2.90	51.6	60.3	8.7	.322
47	Sagittal Arc	102	34.80	0.15	1.50	0.11	4.31	30.0	38.8	8.8	.200
48	Bitrignon-Coronal Arc	102	34.12	0.12	1.26	0.09	3.71	31.0	37.2	6.2	.196
49	Bitrignon-Frontal Arc	102	29.31	0.11	1.07	0.07	3.65	26.5	31.7	5.2	.168
50	Bitrignon-Menton Arc	102	31.10	0.13	1.30	0.09	4.18	28.3	34.2	5.9	.179
51	Bitrignon-Submandibular Arc	102	28.63	0.13	1.28	0.09	4.49	25.9	31.8	5.9	.164
52	Head Length	287	19.47	0.04	0.70	0.03	3.61	16.8	21.4	4.6	.112
53	Glabella to back of head	102	19.61	0.07	0.71	0.05	3.65	17.9	21.7	3.8	.113
54	Sellion to back of head	102	19.49	0.07	0.70	0.05	3.62	17.7	21.6	3.9	.112
55	Pronasale to back of head	102	22.20	0.07	0.75	0.05	3.37	20.1	24.3	4.2	.128
56	Subnasale to back of head	102	20.87	0.08	0.78	0.05	3.75	19.2	23.3	4.1	.120
57	Lip Protrusion to back of head	102	20.91	0.10	1.00	0.07	4.78	18.8	23.9	5.1	.120
58	Menton to back of head	102	20.22	0.11	1.11	0.08	5.50	17.6	23.6	6.0	.116
59	Ectocanthus to back of head	102	17.50	0.07	0.75	0.05	4.27	15.8	19.5	3.7	.101
60	Trignon to back of head	102	10.32	0.07	0.71	0.05	6.91	8.2	12.0	3.8	.059

TABLE 7. STATISTICAL VALUES FOR U. S. ARMY MEN (BASIC TRAINEES) - 1977 (continued)

No.	Measurements	N	Mean	Values in Centimeters							Stature ratio
				SE(M)	S.D.	SE(SD)	V(%)	Range		Total	
								Min.	Max.		
HEAD AND FACE MEASUREMENTS (continued)											
61	Head Breadth	287	15.06	0.03	0.54	0.02	3.56	13.7	16.7	3.0	.087
62	Bitrignon Breadth	102	13.50	0.06	0.59	0.04	4.36	12.1	14.9	2.8	.078
63	Biauricular Breadth	102	17.87	0.09	0.87	0.06	4.88	15.7	20.1	4.4	.103
64	Head Height (Trignon-t. of h.)	102	13.99	0.07	0.68	0.05	5.07	11.5	15.4	3.9	.077
65	Ectocanthus to top of head	102	11.04	0.08	0.79	0.06	7.19	8.9	13.3	4.4	.063
66	Glabella to top of head	102	7.90	0.09	0.86	0.06	10.82	5.9	9.8	3.9	.045
67	Sellion to top of head	102	9.66	0.10	1.00	0.07	10.34	7.8	12.5	4.7	.055
68	Pronasale to top of head	102	13.14	0.11	1.07	0.07	8.11	10.9	16.3	5.4	.075
69	Subnasale to top of head	102	14.49	0.09	0.95	0.07	6.59	12.2	17.2	5.0	.083
70	Stomion to top of head	102	16.86	0.10	1.00	0.07	5.92	14.4	19.4	5.0	.097
71	Menton to top of head	102	21.34	0.10	1.00	0.07	4.69	19.0	24.0	5.0	.123
72	Face Length (Menton-Sellion)	102	11.70	0.07	0.68	0.05	5.77	10.2	13.2	3.0	.067
73	Menton-Grinion	102	18.52	0.08	0.85	0.06	4.59	16.5	20.7	4.2	.106
74	Minimum Frontal Breadth	102	11.13	0.08	0.80	0.06	7.23	9.2	12.7	3.5	.064
75	Face Breadth (Bizygomatic)	102	13.75	0.05	0.52	0.04	3.81	12.5	14.8	2.3	.079
76	Biocular Breadth	102	10.12	0.05	0.49	0.03	4.88	8.7	11.4	2.7	.058
77	Interpupillary Breadth	102	5.89	0.05	0.48	0.03	8.17	4.7	7.3	2.6	.034
78	Nose Length (Subnas.-Sellion)	102	4.97	0.04	0.36	0.03	7.22	4.2	5.8	1.6	.029
79	Nose Breadth	102	3.72	0.05	0.47	0.03	12.76	2.8	4.8	2.0	.021
80	Mouth Breadth, Smiling	102	6.47	0.07	0.72	0.05	11.08	5.1	8.1	3.0	.037
81	Ear Length	102	6.22	0.04	0.44	0.03	7.09	4.9	7.2	2.3	.036
82	Ear Breadth	102	4.34	0.04	0.36	0.03	8.37	3.4	5.3	1.9	.025

TABLE 7. STATISTICAL VALUES FOR U. S. ARMY MEN (BASIC TRAINEES) - 1977 (continued)

No.	Measurements	Values in Centimeters							Stature ratio
		N	Mean	SE(M)	S.D.	SE(SD)	V(%)	Range Min. Max. Total	
HAND MEASUREMENTS									
83	Hand Length	287	19.00	0.06	0.99	0.04	5.19	15.9 21.7 5.8	.109
84	Palm Length	287	10.75	0.03	0.58	0.02	5.38	9.0 12.1 3.1	.062
85	Hand Breadth	287	8.92	0.03	0.43	0.02	4.80	7.8 10.0 2.2	.051
86	Hand Circumference	287	21.11	0.06	1.00	0.04	4.73	18.1 24.0 5.9	.121
FOOT MEASUREMENTS									
87	Foot Length	286	26.76	0.08	1.33	0.06	4.98	22.5 29.6 7.1	.154
88	Instep Length	286	19.71	0.07	1.18	0.05	5.98	16.8 23.0 6.2	.113
89	Foot Breadth	286	9.92	0.03	0.56	0.02	5.67	8.1 11.5 3.4	.057
90	Ball of Foot Circumference	287	25.15	0.08	1.29	0.05	5.11	21.5 28.5 7.0	.144
91	Heel-Ankle Circumference	287	34.02	0.10	1.74	0.07	5.13	28.5 39.0 10.5	.195
92	Sphyrion Height	286	7.38	0.04	0.61	0.03	8.31	5.5 9.4 3.9	.042
	Age (years)	287	19.66	0.14	2.29	0.10	11.65	16.0 30.0 14.0	

TABLE 8. PERCENTILE VALUES FOR U. S. ARMY MEN (BASIC TRAINEES) - 1977

No.	Measurements	Percentiles in Centimeters										Range 99th (1st-99th)
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th	
1	Weight (kilograms)			55.5	59.0	62.6	68.6	78.3	87.4	90.8		
STANDING MEASUREMENTS												
2	Stature			162.8	165.6	169.8	174.1	178.4	182.6	185.3		
3	Axilla Height			121.5	123.9	127.5	131.3	135.1	138.7	140.9		
4	Suprasternale Height			132.6	135.0	138.8	142.7	146.7	150.4	152.7		
5	Chest (Nipple) Height			117.9	120.1	123.7	127.5	131.2	134.5	136.5		
6	Substernale Height			113.4	115.7	119.1	122.6	126.2	129.5	131.5		
7	Elbow (Radiale) Height			101.0	103.0	106.1	109.4	112.7	115.8	117.8		
8	Knuckle Height (Metacarpale III)			68.8	70.3	72.8	75.5	78.2	80.7	82.2		
9	Waist Height (Natural)			94.6	96.6	100.1	104.1	108.1	111.6	113.6		
10	Waist Height (Omphalion)			96.6	98.8	102.0	105.4	109.0	112.3	114.2		
11	Buttock Height			80.8	82.8	86.1	89.5	92.8	95.7	97.6		
12	Gluteal Furrow Height			73.3	74.8	77.3	80.3	83.2	86.0	87.7		
13	Tibiale Height			43.5	44.8	46.6	48.4	50.2	51.8	52.8		
14	Acromion-Radiale Length			30.8	31.4	32.5	33.7	35.0	36.1	36.8		
15	Radiale-Styleion Length			24.4	25.0	25.8	26.8	27.9	29.0	29.6		

TABLE 8. PERCENTILE VALUES FOR U. S. ARMY MEN (BASIC TRAINEES) - 1977 (continued)

No.	Measurements	Percentiles in Centimeters									Range 99th (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th		98th
SITTING MEASUREMENTS												
16	Sitting Height			83.5	84.9	87.0	89.3	91.7	94.0	95.4		
17	Eye Height, Sitting			72.0	73.3	75.3	77.3	79.6	81.8	83.2		
18	Mid-Shoulder Height, Sitting			56.6	57.7	59.4	61.3	63.4	65.4	66.6		
19	Shoulder-Elbow Length			33.3	34.0	35.1	36.3	37.5	38.7	39.5		
20	Elbow-Grip Length			31.7	32.5	33.7	35.0	36.2	37.5	38.3		
21	Elbow-Fingertip Length			43.8	44.8	46.2	47.7	49.4	51.0	52.0		
22	Knee Height, Sitting			50.2	51.4	53.2	55.1	57.1	59.0	60.2		
23	Popliteal Height, Sitting			39.7	40.8	42.5	44.3	46.1	47.7	48.7		
24	Buttock-Knee Length			55.7	56.8	58.7	60.8	62.9	64.8	65.8		
DEPTH AND BREADTH MEASUREMENTS												
25	Chest Depth			18.9	19.4	20.2	21.4	23.0	24.6	25.5		
26	Waist Depth			17.5	17.9	18.6	19.8	21.6	23.5	24.8		
27	Biacromial Breadth			36.1	36.9	38.1	39.5	40.9	42.0	42.6		

TABLE 8. PERCENTILE VALUES FOR U. S. ARMY MEN (BASIC TRAINEES) - 1977 (continued)

No.	Measurements	Percentiles in Centimeters										Range 99th (1st-99th)
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th	
CIRCUMFERENCES												
28	Shoulder Circumference			101.4	103.2	106.5	110.6	115.0	119.1	121.5		
29	Chest Circumference			83.8	85.2	87.9	91.9	97.0	102.4	105.6		
30	Waist Circumference (Natural)			68.8	70.2	72.8	76.9	82.9	89.8	94.5		
31	Waist Circumference (Omphalion)			68.4	70.4	73.4	76.5	83.1	91.5	95.9		
32	Hip (Buttock) Circumference			87.3	88.3	90.5	94.1	98.8	103.8	106.9		
LIMB CIRCUMFERENCES												
33	Biceps Circum., Relaxed			24.8	25.6	27.2	29.0	31.1	32.9	33.9		
34	Biceps Circum., Flexed			27.0	27.9	29.4	31.3	33.2	35.0	36.0		
35	Calf Circumference			31.6	32.4	33.9	35.6	37.6	39.7	40.9		
36	Ankle Circumference			19.3	19.8	20.7	21.7	22.7	23.5	24.0		
SURFACE MEASUREMENTS												
37	Interscye, Back			36.5	37.4	39.1	41.0	43.0	44.8	45.9		
38	Interscye, Front			33.5	34.1	35.3	36.6	38.0	39.3	40.1		

TABLE 8. PERCENTILE VALUES FOR U. S. ARMY MEN (BASIC TRAINEES) - 1977 (continued)

No.	Measurements	Percentiles in Centimeters									Range 99th (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th		98th
SURFACE MEASUREMENTS (continued)												
39	Back Curvature - Chest Level			40.5	41.2	42.6	44.7	47.3	50.0	51.5		
40	Back Curvature - Waist Level			33.5	34.4	36.0	38.2	41.0	44.5	47.0		
41	Back Curvature - Hip Level			42.4	43.0	44.2	46.0	48.5	51.0	52.5		
42	Waist Back Length			39.6	40.7	42.6	44.9	47.1	49.2	50.3		
43	Waist Front Length			36.1	37.1	38.9	41.0	43.1	45.1	46.2		
44	Sleeve Inseam Length			43.9	44.9	46.4	48.2	50.1	51.8	52.9		
45	Sleeve Outseam Length			53.8	54.9	56.6	58.6	60.9	63.2	64.5		
HEAD AND FACE MEASUREMENTS												
46	Head Circumference			53.2	53.9	55.0	56.1	57.1	58.0	58.6		
47	Sagittal Arc			32.7	33.2	33.9	34.7	35.7	36.8	37.5		
48	Bitrignon-Coronal Arc			31.9	32.4	33.2	34.2	35.1	35.7	36.1		
49	Bitrignon-Frontal Arc			27.6	28.0	28.6	29.3	30.1	30.7	31.1		
50	Bitrignon-Menton Arc			29.0	29.4	30.1	31.1	32.2	32.7	33.1		
51	Bitrignon-Submandibular Arc			26.7	26.9	27.5	28.7	29.6	30.4	30.7		

TABLE 8. PERCENTILE VALUES FOR U. S. ARMY MEN (BASIC TRAINEES) - 1977 (continued)

No.	Measurements	Percentiles in Centimeters										Range 99th (1st-99th)
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th	
HEAD AND FACE MEASUREMENTS (continued)												
52	Head Length			18.3	18.6	19.0	19.5	19.9	20.3	20.6		
53	Glabella to back of head			18.5	18.8	19.1	19.6	20.0	20.5	20.8		
54	Sellion to back of head			18.4	18.6	19.1	19.5	19.9	20.3	20.7		
55	Pronasale to back of head			21.0	21.2	21.7	22.2	22.7	23.2	23.4		
56	Subnasale to back of head			19.6	19.9	20.3	20.9	21.3	21.8	22.2		
57	Lip Protrusion to back of head			19.4	19.7	20.2	20.8	21.5	22.3	22.8		
58	Menton to back of head			18.6	18.9	19.4	20.1	20.9	21.7	22.2		
59	Ectocanthus to back of head			16.3	16.5	17.0	17.5	18.0	18.4	18.7		
60	Tragion to back of head			9.2	9.4	9.9	10.3	10.8	11.3	11.5		
61	Head Breadth			14.2	14.4	14.7	15.1	15.4	15.7	16.0		
62	Bitragion Breadth			12.5	12.7	13.1	13.5	13.9	14.3	14.5		
63	Biauricular Breadth			16.5	16.8	17.3	17.8	18.4	19.0	19.4		
64	Head Height (Tragion-top of head)			12.3	12.5	13.0	13.4	13.8	14.2	14.4		
65	Ectocanthus to top of head			9.8	10.1	10.5	11.0	11.6	12.1	12.4		
66	Glabella to top of head			6.5	6.8	7.3	7.9	8.6	9.0	9.4		

TABLE 8. PERCENTILE VALUES FOR U. S. ARMY MEN (BASIC TRAINEES) - 1977 (continued)

No.	Measurements	Percentiles in Centimeters										Range 99th (1st-99th)
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th	
HEAD AND FACE MEASUREMENTS (continued)												
67	Sellion to top of head			8.2	8.3	8.8	9.7	10.3	11.0	11.3		
68	Pronasale to top of head			11.6	11.8	12.3	13.0	13.9	14.6	15.1		
69	Subnasale to top of head			13.0	13.3	13.8	14.4	15.2	15.8	16.2		
70	Stomion to top of head			15.4	15.7	16.1	16.8	17.5	18.3	18.7		
71	Menton to top of head			19.9	20.2	20.6	21.2	22.0	22.7	23.2		
72	Face Length (Menton-Sellion)			10.6	10.8	11.2	11.7	12.2	12.6	12.8		
73	Menton-Crinion			17.1	17.4	18.0	18.6	19.1	19.6	19.9		
74	Minimum Frontal Breadth			9.9	10.1	10.5	11.2	11.8	12.2	12.4		
75	Face Breadth (Bizygomatic)			12.8	13.0	13.4	13.8	14.2	14.4	14.5		
76	Biocular Breadth			9.3	9.5	9.8	10.1	10.5	10.7	10.9		
77	Interpupillary Breadth			5.1	5.3	5.6	5.9	6.2	6.5	6.7		
78	Nose Length (Subnasale-Sellion)			4.4	4.5	4.7	4.9	5.2	5.5	5.6		
79	Nose Breadth			3.0	3.1	3.4	3.7	4.1	4.4	4.6		
80	Mouth Breadth, Smiling			5.4	5.5	5.9	6.4	7.0	7.5	7.7		
81	Ear Length			5.5	5.7	6.0	6.2	6.5	6.8	6.9		
82	Ear Breadth			3.8	3.9	4.1	4.3	4.6	4.8	6.0		

TABLE 8. PERCENTILE VALUES FOR U. S. ARMY MEN (BASIC TRAINEES) - 1977 (continued)

No.	Measurements	Percentiles in Centimeters										Range 99th (1st-99th)
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th	
HAND MEASUREMENTS												
83	Hand Length			17.4	17.8	18.3	19.0	19.7	20.3	20.6		
84	Palm Length			9.8	10.0	10.4	10.8	11.2	11.5	11.7		
85	Hand Breadth			8.3	8.4	8.6	8.9	9.2	9.5	9.7		
86	Hand Circumference			19.5	19.9	20.5	21.1	21.8	22.4	22.8		
FOOT MEASUREMENTS												
87	Foot Length			24.5	25.0	25.9	26.8	27.7	28.5	28.9		
88	Instep Length			17.7	18.2	18.9	19.7	20.5	21.2	21.7		
89	Foot Breadth			9.0	9.2	9.6	9.9	10.3	10.7	10.9		
90	Ball of Foot Circumference			23.2	23.6	24.3	25.1	26.0	26.9	27.4		
91	Heel-Ankle Circumference			31.3	31.9	32.9	33.9	35.2	36.4	37.0		
92	Sphyrion Height			6.4	6.6	7.0	7.4	7.8	8.2	8.4		
Age (years)												
				17.2	17.4	18.0	19.0	20.7	23.2	24.0		
Mean Age - 19.66 years												Number of men - 287

TABLE 9. STATISTICAL VALUES FOR U. S. ARMY WOMEN - 1946

No.	Measurements	N	Mean	SE(M)	S.D.	SE(SD)	V(%)	Values in Centimeters			Stature ratio
								Min.	Range Max.	Total	
1	Weight (kilograms)	8107	59.63	0.10	9.00	0.07	15.10	39.0	111.6	72.6	
STANDING MEASUREMENTS											
2	Stature	8121	162.14	0.07	6.00	0.05	3.71	141.0	184.0	43.0	1.000
3	Cervicale Height	8121	138.26	0.06	5.63	0.04	4.09	121.0	159.0	38.0	.853
4	Shoulder (Acromiale) Height	8118	134.08	0.06	5.51	0.04	4.12	115.0	157.0	42.0	.827
5	Waist Height	8121	102.46	0.05	4.57	0.04	4.48	87.0	122.0	35.0	.632
6	Crotch Height	8113	72.83	0.04	4.03	0.03	5.57	58.0	89.0	31.0	.449
7	Hip (Trochanteric) Height	8120	81.70	0.05	4.29	0.03	5.28	67.0	100.0	33.0	.504
8	Shoulder-Fingertip Length	8118	63.93	0.04	3.49	0.03	5.50	51.0	77.0	26.0	.394
SITTING MEASUREMENTS											
9	Sitting Height	8119	83.66	0.04	3.19	0.03	3.83	71.0	97.0	26.0	.516
10	Trunk Height, Sitting	8119	53.62	0.03	2.72	0.02	5.11	43.0	63.0	20.0	.331
11	Shoulder-Elbow Length	8119	33.20	0.02	1.84	0.01	5.62	25.0	41.0	16.0	.205
12	Elbow-Fingertip Length	8118	42.36	0.02	2.09	0.02	4.98	33.0	52.0	19.0	.261
13	Knee Height, Sitting	8117	47.67	0.03	2.39	0.02	5.07	38.0	57.0	19.0	.294
14	Buttock-Knee Length	8117	56.81	0.03	2.95	0.02	5.23	45.0	67.0	22.0	.350
DEPTH AND BREADTH MEASUREMENTS											
15	Chest Depth (above Bust)	8118	18.08	0.02	1.60	0.01	9.10	13.0	29.0	16.0	.112
16	Trunk Depth	8114	19.23	0.03	2.38	0.02	12.69	12.0	34.0	22.0	.119
17	Chest Breadth	8118	28.43	0.03	2.38	0.02	8.52	20.0	42.0	22.0	.175
18	Bi-iliac Breadth	8120	24.61	0.03	2.32	0.02	9.60	16.0	35.0	19.0	.152
19	Shoulder (Bideltoid) Breadth	8120	39.58	0.03	2.56	0.02	6.54	31.0	56.0	25.0	.244
20	Bustpoint-Bustpoint Breadth	8116	19.28	0.02	2.15	0.02	11.44	11.0	34.0	23.0	.119
21	Elbow-Elbow Breadth	8116	38.20	0.04	3.67	0.03	9.72	27.0	64.0	37.0	.236
22	Hip Breadth, Sitting	8120	36.92	0.03	2.83	0.02	7.76	27.0	50.0	23.0	.228

TABLE 9. STATISTICAL VALUES FOR U. S. ARMY WOMEN - 1946 (continued)

No.	Measurements	N	Mean	SE(M)	Values in Centimeters					Stature ratio	
					S.D.	SE(SD)	V(%)	Range			
								Min.	Max.		Total
CIRCUMFERENCES											
23	Neck Circumference	8112	31.75	0.02	1.67	0.01	5.33	24.0	40.0	16.0	.196
24	Bust Circumference	8115	88.91	0.09	7.68	0.06	8.68	68.0	128.0	60.0	.548
25	Chest Circum. below Bust	8115	77.31	0.07	6.13	0.05	7.98	60.0	117.0	57.0	.477
26	Waist Circumference	8115	67.00	0.07	6.24	0.05	9.38	52.0	110.0	58.0	.413
27	Halfway to Hip Circumference	8109	85.85	0.08	7.51	0.06	8.80	65.0	125.0	60.0	.529
28	Hip Circum. at Trochanterion	8113	95.09	0.07	6.70	0.05	7.08	74.0	126.0	52.0	.586
29	Vert. Trunk Circum., Standing	7771	149.71	0.08	7.16	0.06	4.80	125.0	185.0	60.0	.923
LIMB CIRCUMFERENCES											
30	Scye Circumference	8119	37.92	0.03	3.14	0.02	8.38	23.0	51.0	28.0	.234
31	Biceps Circum., Relaxed	8116	25.62	0.03	2.73	0.02	10.83	18.0	40.0	23.0	.158
32	Forearm Circum., Relaxed	8110	22.53	0.02	1.66	0.01	7.38	17.2	30.1	12.9	.139
33	Wrist Circumference	8112	14.72	0.01	0.81	0.01	5.53	11.4	18.4	7.0	.091
34	Upper Thigh Circumference	7781	56.08	0.06	5.23	0.04	9.40	39.0	79.0	40.0	.346
35	Mid-Thigh Circumference	8112	49.03	0.05	4.91	0.04	10.11	33.0	64.0	41.0	.302
SURFACE MEASUREMENTS											
36	Shoulder Length	8118	12.14	0.01	1.17	0.01	9.60	8.3	16.7	8.4	.075
37	Cervicale to Lat. Neck Point	8116	9.12	0.01	0.94	0.01	10.27	5.8	13.0	7.2	.056
38	Interscye, Back	8120	34.40	0.03	2.75	0.02	8.11	23.0	45.0	22.0	.212
39	Waist Back Length	8115	37.78	0.03	2.28	0.02	6.10	29.0	47.0	18.0	.233
40	Waist Front Length	8106	32.69	0.02	2.00	0.02	6.13	26.0	40.0	14.0	.202
41	Strap Length	8117	71.50	0.07	6.45	0.05	9.08	50.0	100.0	50.0	.441
42	Lateral Neck Point to Waist	8111	42.48	0.03	2.51	0.02	5.98	30.0	52.0	22.0	.262
43	Axilla to Waist Length	8113	23.14	0.03	2.66	0.02	11.73	10.0	35.0	25.0	.143
44	Crotch Length	7778	70.05	0.07	5.77	0.05	8.29	46.0	99.0	53.0	.432

TABLE 9. STATISTICAL VALUES FOR U. S. ARMY WOMEN - 1946 (continued)

No.	Measurements	N	Values in Centimeters					Range		Stature ratio	
			Mean	SE(M)	S.D.	SE(3D)	V(%)	Min.	Max.		Total
HEAD AND FACE MEASUREMENTS											
45	Head Circumference	8112	55.15	0.02	1.55	0.01	2.82	50.0	61.0	11.0	.340
46	Head Length	8118	18.36	0.01	0.65	0.01	3.54	15.8	20.5	4.7	.113
47	Ectocanthus-Otobasion Sup.	8114	7.69	0.01	0.50	0.00	6.50	5.6	9.7	4.1	.047
48	Head Breadth	8118	14.56	0.01	0.55	0.00	3.76	12.4	16.7	4.3	.090
49	Head Height (Tragion-t. of h.)	8114	13.15	0.01	0.90	0.01	6.82	10.0	16.4	6.4	.081
50	Face Length (Menton-Sellion)	8120	11.14	0.01	0.72	0.01	6.42	8.9	15.0	6.1	.069
51	Minimum Frontal Breadth	8118	10.05	0.01	0.59	0.00	5.89	7.5	12.1	4.6	.062
52	Face Breadth (Bizygomatic)	8117	13.07	0.01	0.54	0.00	4.15	11.0	15.2	4.2	.081
53	Biocular Breadth	8116	9.03	0.01	0.46	0.00	5.05	7.5	11.0	3.5	.056
54	Interocular Breadth	8116	3.16	0.00	0.30	0.00	9.65	2.0	4.4	2.4	.019
55	Nose Length (Subnas.-Sell.)	8115	4.81	0.01	0.56	0.00	11.62	2.5	8.7	6.2	.030
56	Nasal Root Breadth	8114	1.56	0.00	0.25	0.00	15.72	1.0	2.6	1.6	.010
57	Nose Breadth	8119	3.13	0.00	0.29	0.00	9.26	2.0	4.4	2.4	.019
HAND MEASUREMENTS											
58	Hand Length	8113	17.49	0.01	0.82	0.01	4.70	14.7	20.8	6.1	.108
59	Hand Breadth	8113	7.69	0.01	0.51	0.00	6.57	6.3	9.9	3.6	.047
FOOT MEASUREMENTS											
60	Foot Length	3321	23.93	0.02	1.11	0.01	4.62	20.0	27.9	7.9	.148
61	Instep Length	1883	17.73	0.02	0.90	0.01	5.08	14.8	20.7	5.9	.109
62	Foot Breadth	3324	9.05	0.01	0.57	0.01	6.27	7.3	11.2	3.9	.056
63	Heel Breadth	3319	5.94	0.01	0.44	0.01	7.39	4.5	7.9	3.4	.037
64	Ball of Foot Circumference	8108	21.89	0.01	1.15	0.01	5.24	18.5	26.3	7.8	.135
	Age (years)	8118	27.30	0.06	5.57	0.04	20.40	16.0	52.0	36.0	

TABLE 10. PERCENTILE VALUES FOR U. S. ARMY WOMEN - 1946

No.	Measurements	Percentiles in Centimeters										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		
STANDING MEASUREMENTS													
1	Weight (kilograms)	44.0	45.3	47.4	49.4	53.2	58.3	64.7	71.7	76.5	82.4	86.6	42.6
2	Stature	148.6	150.1	152.4	154.5	158.0	162.0	166.2	169.9	172.2	174.8	176.6	28.0
3	Cervicale Height	125.5	127.0	129.2	131.1	134.4	138.1	142.0	145.5	147.7	150.2	151.9	26.4
4	Shoulder (Acromiale) Height	121.7	123.1	125.2	127.1	130.3	134.0	137.7	141.2	143.4	145.8	147.5	25.8
5	Waist Height	92.2	93.3	95.1	96.7	99.4	102.4	105.4	108.3	110.1	112.3	113.9	21.7
6	Crotch Height	63.2	64.5	66.2	67.7	70.1	72.8	75.5	78.0	79.6	81.4	82.7	19.5
7	Hip (Trochanteric) Height	72.1	73.2	74.8	86.3	78.8	81.6	84.5	87.2	88.9	91.0	92.3	20.2
8	Shoulder-Fingertip Length	55.8	56.8	58.2	59.5	61.6	63.9	66.2	68.4	69.7	71.3	72.5	16.7
SITTING MEASUREMENTS													
9	Sitting Height	76.2	77.1	78.4	79.6	81.5	83.7	85.8	87.8	88.9	90.2	91.1	14.9
10	Trunk Height, Sitting	47.4	48.1	49.2	50.2	51.7	53.6	55.5	57.2	58.2	59.2	59.9	12.5
11	Shoulder-Elbow Length	28.8	29.3	30.2	30.9	32.0	33.2	34.4	35.5	36.2	37.1	37.6	8.8
12	Elbow-Fingertip Length	37.3	37.9	38.9	39.7	41.0	42.4	43.7	44.9	45.7	46.7	47.4	10.1
13	Knee Height, Sitting	42.2	42.7	43.7	44.6	46.1	47.7	49.2	50.7	51.6	52.8	53.6	11.4
14	Buttock-Knee Length	50.0	50.8	52.0	53.1	54.8	56.8	58.7	60.6	61.7	63.2	64.3	14.3

TABLE 10. PERCENTILE VALUES FOR U. S. ARMY WOMEN - 1946 (continued)

No.	Measurements	Percentiles in Centimeters										Range (1st-99th)	
		Median											
		1st	2nd	5th	10th	25th	50th	75th	90th	95th	98th		99th
DEPTH AND BREADTH MEASUREMENTS													
15	Chest Depth (above Bust)	14.8	15.1	15.6	16.1	17.0	18.0	19.1	20.2	20.9	21.8	22.4	7.6
16	Trunk Depth	15.0	15.4	16.0	16.6	17.5	18.9	20.6	22.4	23.8	25.4	26.6	11.6
17	Chest Breadth	23.6	24.1	24.8	25.6	26.8	28.2	29.8	31.5	32.6	34.1	35.2	11.6
18	Bi-iliac Breadth	19.2	19.9	20.9	21.8	23.1	24.6	26.1	27.6	28.5	29.7	30.5	11.3
19	Shoulder (Bideit.) Breadth	34.2	24.9	35.8	36.6	37.8	39.3	41.1	43.0	44.2	45.6	46.7	12.5
20	Bustpoint-Bustpoint Breadth	14.5	15.1	16.0	16.7	17.8	19.2	20.6	22.0	23.0	24.2	25.0	10.5
21	Elbow-Elbow Breadth	31.2	32.0	33.0	34.0	35.6	37.7	40.3	43.1	44.9	47.1	48.6	17.4
22	Hip Breadth, Sitting	31.1	31.7	32.7	33.5	35.0	36.7	38.6	40.6	42.0	43.6	44.9	13.8
CIRCUMFERENCES													
23	Neck Circumference	28.2	28.6	29.2	29.7	30.6	31.6	32.8	33.9	34.7	35.6	36.4	8.2
24	Bust Circumference	74.6	76.1	78.2	80.0	83.4	87.9	93.4	99.4	103.3	107.8	110.9	36.3
25	Chest Circum. below Bust	65.9	67.0	68.6	70.2	73.0	76.5	80.8	85.5	88.7	92.7	95.6	29.7
26	Waist Circumference	56.2	57.2	58.8	60.1	62.6	66.0	70.4	75.4	79.0	83.4	86.5	30.3
27	Halfway to Hip Circumference	71.3	72.8	75.0	77.0	80.6	85.0	90.2	95.7	99.4	104.1	107.5	36.2
28	Hip Circum. at Trochanterion	82.3	83.5	85.4	87.2	90.4	94.4	99.0	103.9	107.3	111.5	114.7	32.4
29	Vert. Trunk Circum., Stand.	134.4	136.1	138.6	140.9	144.8	149.3	154.2	159.0	162.2	166.1	169.0	34.6

TABLE 10. PERCENTILE VALUES FOR U. S. ARMY WOMEN - 1946 (continued)

No.	Measurements	Percentiles in Centimeters										Range (1st-99th)	
		Median											
		1st	2nd	5th	10th	25th	50th	75th	90th	95th	98th		
LIMB CIRCUMFERENCES													
30	Sbye Circumference	31.3	32.0	33.1	34.1	35.8	37.7	39.8	42.0	43.4	45.2	46.5	15.2
31	Biceps Circum., Relaxed	20.4	20.9	21.7	22.4	23.7	25.3	27.3	29.4	30.7	32.2	33.2	12.8
32	Forearm Circum., Relaxed	19.0	19.4	20.0	20.5	21.4	22.4	23.5	24.7	25.5	26.4	27.1	8.1
33	Wrist Circumference	13.0	13.2	13.5	13.7	14.2	14.7	15.2	15.8	16.1	16.6	17.0	4.0
34	Upper Thigh Circumference	45.4	46.6	48.3	49.8	52.4	55.6	59.3	63.0	65.4	68.2	70.1	24.7
35	Mid-Thigh Circumference	39.0	40.1	41.6	43.1	45.6	48.7	52.1	55.5	57.6	60.2	62.0	23.0
SURFACE MEASUREMENTS													
36	Shoulder Length	9.6	9.8	10.3	10.7	11.4	12.1	12.9	13.6	14.1	14.7	15.2	5.6
37	Cervicale to Lat. Neck Pt.	7.0	7.2	7.5	7.9	8.5	9.2	9.8	10.3	10.6	11.1	11.4	4.4
38	Interscye, Back	28.4	29.0	30.0	30.9	32.5	34.3	36.2	38.0	39.1	40.4	41.3	12.9
39	Waist Back Length	32.4	33.1	34.1	34.9	36.2	37.8	39.3	40.8	41.6	42.5	43.1	10.7
40	Waist Front Length	28.1	28.6	29.4	30.2	31.4	32.6	34.0	35.2	36.1	37.1	37.9	9.8
41	Strap Length	60.0	61.2	62.9	64.3	66.9	70.5	75.1	80.2	83.7	87.9	90.8	30.8
42	Lat. Neck Point to Waist	36.7	37.4	38.5	39.4	40.8	42.4	44.1	45.7	46.8	48.0	48.8	12.1
43	Axilla to Waist Length	17.3	18.0	19.1	20.0	21.4	23.0	24.8	26.5	27.6	29.0	30.0	12.7
44	Crotch Length	57.5	59.1	61.4	63.2	66.2	69.6	73.4	77.4	80.2	83.8	86.5	29.0

TABLE 10. PERCENTILE VALUES FOR U. S. ARMY WOMEN - 1946 (continued)

No.	Measurements	Percentiles in Centimeters										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		99th
HEAD AND FACE MEASUREMENTS													
45	Head Circumference	51.5	52.0	52.6	53.2	54.1	55.1	56.2	57.2	57.8	58.5	59.0	7.5
46	Head Length	16.9	17.0	17.3	17.5	17.9	18.4	18.8	19.2	19.4	19.7	19.9	3.0
47	Ectocanthus-Otobasion Sup.	6.4	6.6	6.9	7.1	7.4	7.7	8.0	8.3	8.5	8.8	9.0	2.6
48	Head Breadth	13.2	13.4	13.7	13.9	14.2	14.6	14.9	15.2	15.4	15.7	15.9	2.7
49	Head Height (Trag.-t. of h.)	11.0	11.2	11.6	12.0	12.6	13.2	13.8	14.3	14.6	15.0	15.4	4.4
50	Face Length (Menton-Sellion)	9.7	9.8	10.0	10.3	10.7	11.1	11.5	12.0	12.3	12.9	13.4	3.7
51	Minimum Frontal Breadth	8.4	8.7	9.0	9.3	9.7	10.1	10.4	10.8	11.0	11.2	11.3	2.9
52	Face Breadth (Bizygomatic)	11.7	11.9	12.2	12.4	12.7	13.1	13.4	13.7	13.9	14.2	14.3	2.6
53	Biocular Breadth	8.0	8.1	8.3	8.4	8.7	9.0	9.3	9.6	9.8	10.0	10.1	2.1
54	Interocular Breadth	2.4	2.5	2.7	2.8	3.0	3.2	3.4	3.6	3.7	3.8	3.9	1.5
55	Nose Length (Subnas.-Sell.)	3.7	3.8	4.0	4.2	4.5	4.8	5.0	5.4	5.8	6.4	7.0	3.3
56	Nasal Root Breadth	1.0	1.1	1.2	1.3	1.4	1.5	1.7	1.9	2.0	2.1	2.2	1.2
57	Nose Breadth	2.5	2.6	2.7	2.8	3.0	3.1	3.3	3.5	3.6	3.8	4.0	1.5

TABLE 10. PERCENTILE VALUES FOR U. S. ARMY WOMEN - 1946 (continued)

No.	Measurements	Percentiles in Centimeters										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		
HAND MEASUREMENTS													
58	Hand Length	15.5	15.8	16.1	16.4	16.9	17.5	18.0	18.6	18.9	19.3	19.6	4.1
59	Hand Breadth	6.7	6.8	7.0	7.1	7.3	7.6	8.0	8.4	8.6	9.0	9.2	2.5
FOOT MEASUREMENTS													
60	Foot Length	21.5	21.8	22.2	22.6	23.2	23.9	24.6	25.4	25.8	26.4	26.7	5.2
61	Instep Length	15.6	15.9	16.3	16.6	17.1	17.7	18.3	18.9	19.2	19.6	19.9	4.3
62	Foot Breadth	7.8	7.9	8.2	8.3	8.7	9.0	9.4	9.8	10.0	10.3	10.4	2.6
63	Heel Breadth	5.0	5.1	5.3	5.4	5.6	5.9	6.2	6.5	6.7	7.0	7.1	2.1
64	Ball of Foot Circumference	19.4	19.7	20.1	20.5	21.1	21.8	22.6	23.4	23.9	24.4	24.8	5.4
Age (years)													
		21.1	22.0	22.7	23.0	23.7	25.9	30.2	35.8	39.7	44.3	47.2	26.1

Mean Age - 27.30 years Number of women - 8100

TABLE 11. STATISTICAL VALUES FOR U. S. ARMY WOMEN - 1977

No.	Measurements	N	Mean	SE(M)	S.D.	SE(SD)	V(%)	Values in Centimeters		Stature ratio
								Min.	Max.	
1	Weight (kilograms)	1331	59.97	0.24	8.69	0.17	14.49	39.9	125.1	85.2
STANDING MEASUREMENTS										
2	Stature	1331	162.96	0.18	6.52	0.13	4.00	142.6	183.8	1.000
3	Cervicale Height	255	140.28	0.38	6.02	0.27	4.29	126.3	161.9	.861
4	Shoulder (Acromiale) Height	1331	133.49	0.16	6.00	0.12	4.49	115.7	155.1	.819
5	Axilla Height	1331	123.25	0.15	5.58	0.11	4.53	104.5	142.1	.756
6	Suprasternale Height	255	132.62	0.35	5.65	0.25	4.26	119.4	152.2	.814
7	Bustpoint Height	1331	118.30	0.15	5.63	0.11	4.76	98.9	135.9	.726
8	Substernale Height	255	113.92	0.31	4.97	0.22	4.36	101.5	130.5	.699
9	Elbow (Radiale) Height	255	102.56	0.30	4.80	0.21	4.68	90.0	118.8	.629
10	Knuckle Height (Metacarp. III)	255	70.99	0.25	3.97	0.18	5.59	58.8	83.5	.436
11	Waist Height	1331	101.39	0.14	5.20	0.10	5.13	84.8	120.8	.622
12	Crotch Height	1331	76.37	0.12	4.38	0.08	5.73	62.4	92.0	.469
13	Hip (Trochanteric) Height	255	85.91	0.28	4.43	0.20	5.15	76.0	101.9	.527
14	Buttock Height	1331	83.80	0.13	4.67	0.09	5.57	70.4	103.3	.514
15	Gluteal Furrow Height	255	74.13	0.25	4.06	0.18	5.48	62.3	87.9	.455
16	Kneecap (Patella) Height	1331	47.90	0.07	2.65	0.05	5.53	39.4	58.1	.294
17	Tibiale Height	255	44.05	0.15	2.47	0.11	5.61	37.0	51.8	.270
18	Calf Height	1331	32.55	0.06	2.30	0.04	7.07	25.3	40.4	.200
19	Acromion-Radiale Length	255	30.85	0.10	1.67	0.07	5.41	26.6	37.2	.189
20	Radiale-Stylian Length	255	24.37	0.09	1.47	0.07	6.02	21.0	29.9	.150

TABLE 11. STATISTICAL VALUES FOR U. S. ARMY WOMEN - 1977 (continued)

No.	Measurements	N	Values in Centimeters					Range		Stature ratio	
			Mean	SE(M)	S.D.	SE(ED)	V(%)	Min.	Max.		Total
SITTING MEASUREMENTS											
21	Sitting Height	1331	85.08	0.10	3.59	0.07	4.22	73.1	96.2	23.1	.522
22	Eye Height, Sitting	1331	73.64	0.09	3.46	0.07	4.71	62.5	84.1	21.6	.452
23	Shoulder-Elbow Length	1331	33.56	0.05	1.75	0.03	5.21	27.3	40.2	12.9	.206
24	Elbow-Grip Length	255	32.25	0.11	1.76	0.08	5.46	27.7	37.7	10.0	.198
25	Elbow-Fingertip Length	1331	43.52	0.06	2.28	0.04	5.25	37.1	51.0	13.9	.267
26	Elbow Rest Height	255	20.73	0.17	2.74	0.12	13.20	11.1	28.0	16.9	.127
27	Thigh Clearance Height	255	15.41	0.08	1.31	0.06	8.50	12.2	19.9	7.7	.095
28	Knee Height, Sitting	1331	50.99	0.07	2.60	0.05	5.11	43.4	60.7	17.3	.313
29	Popliteal Height, Sitting	1331	41.68	0.06	2.35	0.05	5.64	34.7	49.1	14.4	.256
30	Buttock-Knee Length	1331	57.85	0.08	3.06	0.06	5.29	48.7	68.5	19.8	.355
DEPTH AND BREADTH MEASUREMENTS											
31	Bust Depth	1331	22.92	0.06	2.23	0.04	9.71	15.5	33.2	17.7	.141
32	Waist Depth	1331	18.29	0.06	2.21	0.04	12.09	13.4	32.7	19.3	.112
33	Abdom. Ext. Depth, Sitting	255	21.91	0.16	2.59	0.11	11.83	17.5	31.6	14.1	.134
34	Chest Breadth	1331	28.25	0.05	1.86	0.04	6.57	23.5	40.8	17.3	.173
35	Waist Breadth	1331	25.58	0.07	2.46	0.05	9.60	19.4	40.0	20.6	.157
36	Bispinous Breadth	255	23.27	0.14	2.20	0.10	9.46	17.7	30.0	12.3	.143
37	Hip Breadth, Standing	1331	35.37	0.07	2.47	0.05	6.98	28.5	49.1	20.6	.217
38	Biacromial Breadth	255	35.71	0.10	1.61	0.07	4.51	30.6	39.6	9.0	.219
39	Shoulder (Bideltoïd) Breadth	1331	42.05	0.06	2.24	0.04	5.32	36.3	56.1	19.8	.258
40	Abdom. Ext. Breadth, Sitting	255	29.98	0.19	2.99	0.13	9.96	22.3	39.4	17.1	.184
41	Thigh-to-Thigh Breadth, Sit.	255	38.27	0.20	3.27	0.14	8.54	30.1	47.8	17.7	.235

TABLE 11. STATISTICAL VALUES FOR U. S. ARMY MEN - 1977 (continued)

No.	Measurements	N	Values in Centimeters						Range		Stature ratio
			Mean	SE(M)	S.D.	SE(SD)	V(%)	Min.	Max.	Total	
CIRCUMFERENCES											
42	Neck Circumference	1331	32.36	0.04	1.59	0.03	4.90	27.5	41.7	14.2	.199
43	Shoulder Circumference	1331	100.39	0.15	5.46	0.11	5.44	86.3	139.9	53.6	.616
44	Chest Circumference at Scye	1331	85.55	0.14	5.19	0.10	6.07	71.8	120.7	48.9	.525
45	Bust Circumference	1331	88.21	0.18	6.43	0.12	7.28	68.9	128.4	59.5	.541
46	Chest Circum. below Bust	1331	74.82	0.14	5.02	0.10	6.71	62.4	107.4	45.0	.459
47	Waist Circumference (Natural)	1331	71.01	0.19	6.90	0.13	9.71	56.5	117.5	61.0	.436
48	Waist Circum. (Omphalion)	255	76.21	0.49	7.89	0.35	10.35	60.2	109.0	48.8	.468
49	Hip (Buttock) Circumference	1331	95.52	0.18	6.39	0.12	6.69	77.4	134.6	57.2	.586
50	Hip (Buttock) Circum., Sitting	255	98.10	0.43	6.83	0.30	6.96	81.8	125.3	43.5	.602
51	Vert. Trunk Circum., Standing	1331	153.84	0.20	7.27	0.14	4.72	130.3	186.2	55.9	.944
52	Vert. Trunk Circum., Sitting	255	146.44	0.45	7.26	0.32	4.96	125.5	165.5	40.0	.899
LIMB CIRCUMFERENCES											
53	Scye Circumference	1331	37.52	0.07	2.42	0.05	6.46	30.3	51.3	21.0	.230
54	Axillary Arm Circumference	255	27.63	0.16	2.59	0.11	9.37	22.5	36.9	14.4	.170
55	Biceps Circum., Relaxed	255	25.89	0.16	2.56	0.11	9.89	20.2	34.4	14.2	.159
56	Biceps Circum., Flexed	1331	26.87	0.06	2.29	0.04	8.54	20.8	39.3	18.5	.165
57	Elbow Circum., Flexed	1331	25.98	0.04	1.62	0.03	6.25	21.5	33.0	11.5	.159
58	Forearm Circum., Relaxed	255	23.28	0.09	1.50	0.07	6.43	20.4	28.7	8.3	.143
59	Forearm Circum., Flexed	1331	24.63	0.04	1.53	0.03	6.23	20.2	33.0	12.8	.151
60	Wrist Circumference	1331	14.71	0.02	0.69	0.01	4.66	12.9	17.5	4.6	.090
61	Upper Thigh Circumference	1331	56.92	0.13	4.59	0.09	8.07	43.1	79.9	36.8	.349
62	Knee Circumference	1331	34.83	0.06	2.26	0.04	6.49	28.8	45.6	16.8	.214
63	Calf Circumference	1331	35.09	0.07	2.51	0.05	7.15	27.9	47.6	19.7	.215
64	Ankle Circumference	1331	20.73	0.03	1.25	0.02	6.02	16.7	24.9	8.2	.127

TABLE 11. STATISTICAL VALUES FOR U. S. ARMY WOMEN - 1977 (continued)

No.	Measurements	Values in Centimeters							Stature ratio		
		N	Mean	SE(M)	S.D.	SE(SD)	V(%)	Range			
								Min.		Total	
SURFACE MEASUREMENTS											
65	Shoulder Length	1331	15.00	0.03	1.06	0.02	7.08	11.8	18.7	6.9	.092
66	Interscye, Back	1331	37.86	0.06	2.35	0.05	6.22	30.5	47.7	17.2	.232
67	Interscye, Front	1331	33.17	0.05	1.75	0.03	5.26	28.4	40.5	12.1	.204
68	Back Curvature - Bust Level	1331	41.97	0.09	3.17	0.06	7.55	30.6	62.5	31.9	.258
69	Back Curvature - Waist Level	1331	35.31	0.10	3.48	0.07	9.85	27.2	59.2	32.0	.217
70	Back Curvature - Hip Level	1331	47.51	0.10	3.74	0.07	7.86	35.9	68.6	32.7	.292
71	Waist Back Length	1331	40.85	0.07	2.65	0.05	6.50	33.7	51.5	17.8	.251
72	Waist Front Length	1331	36.74	0.07	2.63	0.05	7.16	29.5	47.7	18.2	.225
73	Nec. to Bustpoint Length	1331	25.38	0.06	2.08	0.04	8.24	19.0	22.1	14.1	.155
74	Axilla to Waist Length	1331	23.10	0.07	2.52	0.05	10.89	16.3	35.1	18.8	.142
75	Sleeve Inseam Length	1331	45.05	0.07	2.61	0.05	5.80	36.5	54.5	18.0	.276
76	Sleeve Outseam Length	1331	53.80	0.08	2.96	0.06	5.51	44.4	64.6	20.2	.330
77	Crotch Length	1331	72.93	0.15	5.46	0.11	7.49	52.6	100.2	47.6	.448
HEAD AND FACE MEASUREMENTS											
78	Head Circumference	1331	54.92	0.04	1.64	0.03	2.98	49.7	61.2	11.5	.337
79	Sagittal Arc	216	33.63	0.11	1.55	0.07	4.61	29.9	38.9	9.0	.206
80	Bitrignon-Coronal Arc	216	33.22	0.09	1.27	0.06	3.84	30.2	38.3	8.1	.204
81	Bitrignon-Frontal Arc	216	28.40	0.07	1.03	0.05	3.62	25.7	31.2	5.5	.174
82	Bitrignon-Menton Arc	216	29.36	0.09	1.31	0.06	4.47	25.9	33.4	7.5	.180
83	Bitrignon-Submandibular Arc	216	26.49	0.09	1.34	0.06	5.07	23.2	30.5	7.3	.163
84	Head Length	1331	18.71	0.02	0.67	0.01	3.58	16.2	20.8	4.6	.115
85	Glabella to back of head	216	19.25	0.07	0.98	0.05	5.11	16.4	22.8	6.4	.118
86	Sellion to back of head	216	20.16	0.07	0.96	0.05	4.75	17.6	23.9	6.3	.124
87	Pronasale to back of head	216	21.49	0.07	0.98	0.05	4.54	18.9	25.0	6.1	.132

TABLE 11. STATISTICAL VALUES FOR U. S. ARMY WOMEN - 1977 (continued)

No.	Measurements	N	Mean	SE(M)	Values in Centimeters					Stature ratio	
					SE(N)	S.D.	SE(SD)	V(%)	Range		
									Min.		Max.
HEAD AND FACE MEASUREMENTS (continued)											
88	Subnasale to back of head	216	20.11	0.07	1.00	0.05	4.98	17.5	23.7	6.2	
89	Lip Protrusion to back of head	216	20.10	0.08	1.15	0.06	5.75	17.5	24.2	6.7	
90	Menton to back of head	216	19.47	0.07	1.10	0.05	5.65	17.0	22.8	5.8	
91	Ectocanthus to back of head	216	17.17	0.06	0.93	0.04	5.43	14.8	20.9	6.1	
92	Tragion to back of head	216	10.06	0.06	0.91	0.04	9.01	8.4	13.5	5.1	
93	Head Breadth	1331	14.61	0.01	0.54	0.01	3.69	13.0	16.5	3.5	
94	Bitragion Breadth	216	12.98	0.04	0.53	0.03	4.11	11.5	14.6	3.1	
95	Head Height (Tragion-t. of h.)	216	13.19	0.05	0.67	0.03	5.08	11.2	15.6	4.2	
96	Ectocanthus to top of head	216	12.13	0.05	0.80	0.04	6.61	9.9	16.0	6.1	
97	Glabella to top of head	216	8.44	0.06	0.87	0.04	10.28	6.4	12.7	6.3	
98	Sellion to top of head	216	10.06	0.06	0.93	0.04	9.26	7.4	14.4	7.0	
99	Pronasale to top of head	216	13.55	0.07	0.99	0.05	7.34	11.0	18.0	7.0	
100	Subnasale to top of head	216	14.80	0.06	0.95	0.05	6.40	12.5	19.4	6.9	
101	Stomion to top of head	216	16.84	0.07	1.01	0.05	5.99	14.4	21.8	7.4	
102	Menton to top of head	216	20.88	0.07	1.02	0.05	4.88	18.5	25.1	6.6	
103	Face Length (Menton-Sellion)	216	10.69	0.04	0.57	0.03	5.31	9.5	12.3	2.8	
104	Menton-Crinion	216	17.58	0.06	0.83	0.04	4.71	15.2	20.2	5.0	
105	Minimum Frontal Breadth	216	10.52	0.03	0.51	0.02	4.86	9.2	12.2	3.0	
106	Face Breadth (Bizygomatic)	216	13.20	0.04	0.53	0.03	4.00	11.6	14.5	2.9	
107	Biocular Breadth	216	9.62	0.03	0.50	0.02	5.20	8.2	11.0	2.8	
108	Interpupillary Breadth	216	5.82	0.03	0.44	0.02	7.58	4.5	7.0	2.5	
109	Nose Length (Subnas.-Sellion)	216	4.58	0.02	0.33	0.02	7.10	3.7	5.6	1.9	
110	Nose Breadth	216	3.41	0.03	0.45	0.02	13.25	2.5	4.7	2.2	
111	Mouth Breadth, Smiling	216	5.88	0.04	0.56	0.03	9.51	4.5	7.6	3.1	

TABLE 11. STATISTICAL VALUES FOR U. S. ARMY WOMEN - 1977 (continued)

No.	Measurements	N	Values in Centimeters						Range		Stature ratio
			Mean	SE(M)	S.D.	SE(SD)	V(%)	Min.	Max.	Total	
HAND MEASUREMENTS											
112	Hand Length	1331	17.44	0.02	0.90	0.02	5.17	14.9	20.4	5.5	.107
113	Palm Length	1331	9.88	0.01	0.52	0.01	5.29	8.2	11.6	3.4	.061
114	Hand Breadth	1331	7.82	0.01	0.39	0.01	4.97	6.6	9.1	2.5	.048
115	Hand Circumference	1331	18.45	0.02	0.86	0.02	4.64	15.8	21.2	5.4	.113
FOOT MEASUREMENTS											
116	Foot Length	1331	24.32	0.03	1.25	0.02	5.14	20.9	29.8	8.9	.149
117	Instep Length	1331	17.85	0.03	0.99	0.02	5.52	15.0	21.5	6.5	.110
118	Foot Breadth	1331	8.87	0.01	0.52	0.01	5.81	7.5	10.8	3.3	.054
119	Heel Breadth	1331	6.09	0.01	0.41	0.01	6.75	5.0	7.6	2.6	.037
120	Ball of Foot Circumference	1331	22.61	0.03	1.14	0.02	5.06	19.5	27.2	7.7	.139
121	Instep Circumference	1331	23.48	0.03	1.26	0.02	5.38	20.1	27.7	7.6	.144
122	Heel-Ankle Circumference	1331	30.79	0.04	1.46	0.03	4.73	26.8	36.1	9.3	.189
123	Ankle Height	1331	10.86	0.03	1.02	0.02	9.37	8.0	14.9	6.9	.067
124	Sphyrion Height	1331	6.46	0.01	0.54	0.01	8.40	4.6	8.4	3.8	.040
SKINFOLD THICKNESS MEASUREMENTS											
125	Subscapular Skinfold	255	1.40	0.04	0.61	0.03	43.29	0.60	3.50	2.90	
126	Triceps Skinfold	255	1.74	0.03	0.50	0.02	28.61	0.70	3.50	2.80	
127	Biceps Skinfold	255	0.84	0.02	0.33	0.02	45.62	0.20	2.20	2.00	
128	Suprailiac Skinfold	255	1.68	0.04	0.71	0.03	42.26	0.10	3.90	3.80	
	Age (years)	1331	23.10	0.15	5.40	0.13	23.38	17.0	60.0	43.0	

TABLE 12. PERCENTILE VALUES FOR U. S. ARMY WOMEN - 1977

No.	Measurements	Percentiles in Centimeters										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		
1	Weight (kilograms)	42.7	44.0	46.6	49.3	54.1	59.6	65.1	70.7	74.5	79.7	83.8	41.1
STANDING MEASUREMENTS													
2	Stature	148.2	150.0	152.6	154.8	158.4	162.8	167.3	171.6	174.1	176.8	178.4	30.2
3	Cervicale Height	126.9	127.8	130.0	132.3	136.4	140.5	144.0	147.3	149.8	153.5	156.9	30.0
4	Shoulder (Acromiale) Height	120.4	121.8	123.9	125.8	129.3	133.3	137.6	141.5	143.7	146.0	147.5	27.1
5	Axilla Height	110.8	112.2	114.3	116.2	119.4	123.1	127.1	130.7	132.8	134.9	136.2	25.4
6	Suprasternale Height	120.7	121.6	123.4	125.3	128.8	132.6	136.3	139.7	142.0	144.9	147.2	26.5
7	Bustpoint Height	106.0	107.3	109.3	111.1	114.4	118.2	122.1	125.7	127.8	130.1	131.5	25.5
8	Substernale Height	103.4	104.2	105.8	107.5	110.6	113.9	117.2	120.2	122.2	124.9	127.0	23.6
9	Elbow (Radiale) Height	92.9	93.6	94.9	96.4	99.1	102.4	105.8	108.9	110.7	112.7	114.1	21.2
10	Knuckle Height (Meta. III)	61.9	63.0	64.6	66.0	68.3	70.9	73.7	76.1	77.5	78.8	79.5	17.6
11	Waist Height	89.7	91.1	93.2	95.0	97.8	101.2	104.8	108.2	110.3	112.7	114.2	24.5
12	Crotch Height	66.8	67.9	69.5	70.9	73.3	76.1	79.3	82.2	83.9	85.7	86.8	20.0
13	Hip (Trochanteric) Height	77.1	77.6	78.7	80.1	82.7	85.8	88.9	91.5	93.2	95.1	96.6	19.5
14	Buttock Height	74.0	74.8	76.4	77.9	80.5	83.6	86.8	89.8	91.8	94.1	95.9	21.9
15	Gluteal Furrow Height	65.6	66.5	67.9	69.2	71.4	73.9	76.6	79.3	81.0	83.1	84.6	19.0

TABLE 12. PERCENTILE VALUES FOR U. S. ARMY MEN - 1977 (continued)

No.	Measurements	Percentiles in Centimeters										Range (1st-99th)	
		Mediar											
		1st	2nd	5th	10th	25th	50th	75th	90th	95th	98th		99th
STANDING MEASUREMENTS (continued)													
16	Kneecap (Patella) Height	42.1	42.8	43.8	44.6	46.0	47.8	49.7	51.5	52.5	53.6	54.2	12.1
17	Tibiale Height	38.6	39.1	40.0	40.9	42.4	44.0	45.6	47.2	48.2	49.6	50.6	12.0
18	Calf Height	27.8	28.2	29.0	29.7	30.9	32.4	34.1	35.6	36.6	37.6	38.3	10.5
19	Acromion-Radiale Length	27.3	27.5	28.1	28.7	29.8	30.9	31.9	32.8	33.4	34.3	35.1	7.8
20	Radiale-Stylian Length	21.2	21.6	22.1	22.6	23.3	24.2	25.3	26.4	27.0	27.6	27.9	6.7
SITTING MEASUREMENTS													
21	Sitting Height	76.3	77.4	79.0	80.4	82.7	85.2	87.6	89.7	90.8	92.0	92.7	16.4
22	Eye Height, Sitting	65.3	66.2	67.7	69.1	71.4	73.8	76.0	77.9	79.1	80.6	81.6	16.3
23	Shoulder-Elbow Length	29.8	30.2	30.8	31.4	32.3	33.5	34.7	35.9	36.6	37.2	37.6	7.8
24	Elbow-Grip Length	28.4	28.9	29.6	30.1	31.0	32.1	33.4	34.6	35.4	36.3	36.8	8.4
25	Elbow-Fingertip Length	38.7	39.2	40.0	40.7	41.9	43.4	45.0	46.6	47.5	48.5	49.2	10.5
26	Elbow Rest Height	14.7	15.2	16.1	17.1	18.9	20.8	22.6	24.1	25.0	26.2	27.0	12.3
27	Thigh Clearance Height	12.5	12.7	13.2	13.7	14.6	15.4	16.2	17.0	17.5	18.3	18.9	6.4

TABLE 12. PERCENTILE VALUES FOR U. S. ARMY WOMEN - 1977 (continued)

No.	Measurements	Percentiles in Centimeters										Range 99th (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		
SITTING MEASUREMENTS (continued)													
28	Knee Height, Sitting	45.5	46.0	46.9	47.7	49.2	50.9	52.7	54.4	55.5	56.6	57.3	11.8
29	Popliteal Height, Sitting	35.4	37.0	38.0	38.8	40.1	41.6	43.2	44.8	45.7	46.7	47.3	10.9
30	Buttock-Knee Length	51.1	51.9	53.1	54.0	55.7	57.7	59.9	62.0	63.2	64.5	65.3	14.2
DEPTH AND BREADTH MEASUREMENTS													
31	Bust Depth	18.6	19.0	19.6	20.2	21.4	22.7	24.3	25.8	26.8	28.1	29.1	10.5
32	Waist Depth	14.4	14.8	15.3	15.9	16.8	18.0	19.4	21.0	22.2	23.9	25.1	10.7
33	Abdom. Ext. Depth, Sitting	17.7	17.9	18.4	19.0	20.1	21.5	23.2	25.3	26.9	29.2	31.1	13.4
34	Chest Breadth	24.5	24.8	25.4	26.0	27.0	28.2	29.4	30.6	31.4	32.4	33.2	8.7
35	Waist Breadth	21.2	21.5	22.1	22.7	23.9	25.3	26.9	28.7	30.0	31.7	33.1	11.9
36	Bispinous Breadth	18.3	19.2	20.1	20.8	21.8	23.0	24.6	26.3	27.5	28.8	29.7	11.4
37	Hip Breadth, Standing	30.1	30.7	31.5	32.3	33.7	35.2	36.9	38.5	39.5	40.9	41.9	11.8
38	Biacromial Breadth	32.2	32.5	33.0	33.6	34.6	35.7	36.8	37.8	38.3	39.1	39.6	7.4
39	Shoulder (Bidel.) Breadth	37.3	37.7	38.4	39.2	40.5	42.0	43.5	44.8	45.7	46.7	47.5	10.2

TABLE 12. PERCENTILE VALUES FOR U. S. ARMY WOMEN - 1977 (continued)

No.	Measurements	Percentiles in Centimeters										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		99th
BREADTH MEASUREMENTS (continued)													
40	Abdom. Ext. Breadth, Sitting	23.9	24.6	25.6	26.4	27.8	29.7	31.8	34.0	35.4	36.9	37.9	14.0
41	Thigh-to-Thigh Breadth, Sit.	31.6	32.1	33.0	34.0	36.0	38.2	40.4	42.5	43.9	45.7	47.1	15.5
CIRCUMFERENCES													
42	Neck Circumference	29.1	29.4	29.9	30.4	31.3	32.3	33.4	34.4	35.0	35.8	36.3	7.2
43	Shoulder Circumference	89.4	90.3	91.9	93.6	96.7	100.2	103.8	107.2	109.4	112.2	114.3	24.9
44	Chest Circum. at Scye	75.2	76.0	77.5	79.1	82.0	85.3	88.7	92.1	94.3	97.2	99.4	24.2
45	Bust Circumference	76.2	76.8	78.4	80.2	83.7	87.9	92.1	96.2	99.0	102.8	105.8	29.6
46	Chest Circum. below Bust	66.0	66.3	67.4	68.7	71.3	74.5	77.8	81.0	83.4	86.6	89.2	23.2
47	Waist Circum. (Natural)	59.0	60.0	61.7	63.4	66.3	70.0	74.6	79.8	83.5	88.5	92.4	33.4
48	Waist Circum. (Omphalion)	62.6	63.8	65.5	67.2	70.4	75.1	80.9	87.1	90.9	95.3	98.0	35.4
49	Hip (Buttock) Circumference	81.6	83.1	85.5	87.7	91.3	95.3	99.4	103.4	106.1	109.6	112.2	30.6
50	Hip (Buttock) Circum., Sit.	85.1	86.0	87.7	89.6	93.3	97.7	102.4	106.9	109.8	113.3	115.9	30.8
51	Vert. Trunk Circum., Stand.	136.5	138.9	142.2	144.9	149.1	153.7	158.2	163.2	166.1	169.5	171.8	35.3
52	Vert. Trunk Circum., Sit.	131.7	132.7	134.8	137.0	141.3	146.3	151.4	155.9	158.7	161.8	164.0	32.3

TABLE 12. PERCENTILE VALUES FOR U. S. ARMY WOMEN - 1977 (continued)

No.	Measurements	Percentiles in Centimeters										Range 99th (1st-99th)	
		Median											
		1st	2nd	5th	10th	25th	50th	75th	90th	95th	98th		
LIMB CIRCUMFERENCES													
53	Scye Circumference	32.5	33.0	33.8	34.6	35.9	37.4	39.0	40.6	41.7	43.1	44.2	11.7
54	Axillary Arm Circumference	22.7	23.0	23.6	24.4	25.8	27.5	29.3	31.0	32.2	33.7	34.9	12.2
55	Biceps Circum., Relaxed	21.0	21.3	21.5	22.4	24.1	25.9	27.4	28.8	30.3	32.6	33.5	12.5
56	Biceps Circum., Flexed	21.9	22.4	23.2	24.0	25.3	26.8	28.3	29.7	30.7	32.0	33.0	11.1
57	Elbow Circum., Flexed	22.5	22.9	23.5	24.0	24.9	25.9	27.0	28.1	28.8	29.7	30.3	7.8
58	Forearm Circum., Relaxed	20.5	20.6	21.0	21.4	22.2	23.2	24.3	25.3	25.9	26.6	27.0	6.5
59	Forearm Circum., Flexed	21.2	21.6	22.2	22.7	23.6	24.6	25.6	26.6	27.1	27.8	28.3	7.1
60	Wrist Circumference	13.2	13.4	13.6	13.8	14.2	14.7	15.2	15.6	15.8	16.1	16.2	3.0
61	Upper Thigh Circumference	46.4	47.5	49.4	51.1	53.9	56.9	59.8	62.6	64.5	67.0	69.0	22.6
62	Knee Circumference	30.2	30.6	31.2	32.0	33.3	34.7	36.2	37.7	38.7	40.0	41.0	10.8
63	Calf Circumference	29.8	30.2	31.0	31.9	33.4	35.0	36.7	38.3	39.2	40.4	41.3	11.5
64	Ankle Circumference	17.9	18.2	18.7	19.2	19.9	20.7	21.6	22.4	22.8	23.4	23.7	5.8

TABLE 12. PERCENTILE VALUES FOR U. S. ARMY WOMEN - 1977 (continued)

No.	Measurements	Percentiles in Centimeters										Range 99th (1st-99th)	
		Median											
		1st	2nd	5th	10th	25th	50th	75th	90th	95th	98th		
SURFACE MEASUREMENTS													
65	Shoulder Length	12.5	12.8	13.3	13.7	14.3	15.0	15.7	16.4	16.8	17.3	17.7	5.2
66	Interscye, Back	32.4	33.0	33.4	34.8	36.3	37.9	39.4	40.8	41.7	42.8	43.6	11.2
67	Interscye, Front	29.4	29.8	30.4	31.0	32.0	33.1	34.3	35.4	36.2	37.0	37.6	8.2
68	Back Curvature - Bust Level	35.3	36.0	37.0	38.1	39.8	41.8	43.9	46.0	47.4	49.2	50.6	15.3
69	Back Curvature - Waist Level	29.1	29.7	30.6	31.4	33.0	34.8	37.1	39.7	41.6	44.2	46.3	17.2
70	Back Curvature - Hip Level	39.6	40.5	41.8	43.0	45.0	47.3	49.8	52.3	54.0	55.9	57.3	17.7
71	Maist Back Length	35.4	35.9	36.7	37.5	39.0	40.7	42.6	44.3	45.4	46.7	47.6	12.2
72	Waist Front Length	31.6	32.0	32.8	33.5	34.9	36.5	38.3	40.1	41.4	43.0	44.3	12.7
73	Neck to Bustpoint Length	21.0	21.3	21.9	22.6	23.8	25.2	26.7	28.0	28.8	29.8	30.6	9.6
74	Axilla to Waist Length	18.1	18.5	19.3	20.1	21.4	22.9	24.5	26.3	27.6	29.3	30.6	12.5
75	Sleeve Inseam Length	39.5	40.1	41.0	41.8	43.2	44.9	46.7	48.5	49.6	50.8	51.7	12.2
76	Sleeve Outseam Length	47.1	48.0	49.2	50.1	51.7	53.6	55.8	57.8	58.9	60.1	60.7	13.6
77	Crotch Length	58.1	60.5	63.7	66.2	69.7	73.1	76.5	79.6	81.5	83.8	85.3	27.2

TABLE 12. PERCENTILE VALUES FOR U. S. ARMY WOMEN - 1977 (continued)

No.	Measurements	Percentiles in Centimeters										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		99th
HEAD AND FACE MEASUREMENTS													
78	Head Circumference	51.4	51.8	52.3	52.9	53.8	54.9	56.0	57.0	57.7	58.6	59.2	7.8
79	Sagittal Arc	30.6	31.0	31.1	31.7	32.5	33.6	34.6	35.6	36.1	37.1	38.2	7.6
80	Bitrignon-Coronal Arc	30.5	30.8	31.3	31.7	32.4	33.2	34.0	34.9	35.4	36.0	36.4	5.9
81	Bitrignon-Frontal Arc	26.1	26.3	26.7	27.0	27.7	28.4	29.1	29.7	30.1	30.6	31.0	4.9
82	Bitrignon-Menton Arc	26.3	26.7	27.3	27.7	28.5	29.3	30.2	31.1	31.6	32.3	32.7	6.4
83	Bitrignon-Submandibular Arc	23.5	23.9	24.5	24.9	25.5	26.4	27.4	28.4	28.9	29.3	29.5	6.0
84	Head Length	17.1	17.3	17.6	17.9	18.3	18.7	19.2	19.6	19.8	20.1	20.3	3.2
85	Glabella to back of head	17.1	17.5	17.9	18.2	18.6	19.1	19.8	20.6	21.1	21.7	22.2	5.1
86	Sellion to back of head	18.1	18.4	18.8	19.1	19.5	20.0	20.7	21.4	22.0	22.6	23.0	4.9
87	Pronasale to back of head	19.4	19.7	20.1	20.4	20.8	21.4	22.1	22.8	23.2	23.8	24.2	4.8
88	Subnasale to back of head	18.0	18.3	18.6	18.9	19.4	20.0	20.7	21.4	21.9	22.5	22.9	4.9
89	Lip Protrusion to b. of h.	18.0	18.2	18.5	18.8	19.3	20.0	20.8	21.6	22.2	23.0	23.7	5.7
90	Menton to back of head	17.2	17.4	17.8	18.2	18.7	19.4	20.2	20.9	21.4	22.0	22.4	5.2
91	Ectocanthus to back of head	15.3	15.5	15.8	16.1	16.5	17.1	17.7	18.4	18.8	19.5	20.0	4.7
92	Trignon to back of head	8.6	8.6	8.8	9.0	9.4	9.9	10.6	11.2	11.7	12.4	12.9	4.3

TABLE 12. PERCENTILE VALUES FOR U. S. ARMY WOMEN - 1977 (continued)

Percentiles in Centimeters													
No.	Measurements	Median											Range (1st-99th)
		1st	2nd	5th	10th	25th	50th	75th	90th	95th	98th	99th	
HEAD AND FACE MEASUREMENTS (continued)													
93	Head Breadth	13.4	13.6	13.8	13.9	14.2	14.6	15.0	15.3	15.6	15.8	16.1	2.7
94	Bitragion Breadth	11.6	11.8	12.1	12.3	12.6	13.0	13.3	13.7	13.9	14.1	14.2	2.6
95	Head Height (Trag.-t. of h.)	11.8	11.9	12.1	12.3	12.7	13.2	13.6	14.0	14.3	14.6	14.8	3.0
96	Ectocanthus to top of head	10.2	10.5	10.8	11.1	11.6	12.1	12.7	13.1	13.4	13.6	13.7	3.5
97	Glabella to top of head	6.7	6.8	7.1	7.4	7.8	8.4	9.0	9.5	9.9	10.3	10.6	3.9
98	Sellion to top of head	8.0	8.2	8.6	8.9	9.4	10.1	10.7	11.2	11.5	11.8	12.1	4.1
99	Pronasale to top of head	11.4	11.6	11.9	12.3	12.9	13.6	14.2	14.8	15.1	15.5	15.7	4.3
100	Subnasale to top of head	12.6	12.9	13.3	13.7	14.2	14.8	15.4	16.0	16.4	16.7	16.9	4.3
101	Stomion to top of head	14.7	14.9	15.2	15.6	16.2	16.8	17.5	18.0	18.4	18.8	19.1	4.4
102	Menton to top of head	18.7	18.9	19.3	19.6	20.2	20.8	21.6	22.2	22.6	23.0	23.3	4.6
103	Face Length (Menton-Sellion)	9.5	9.7	9.9	10.0	10.3	10.6	11.1	11.5	11.8	12.0	12.1	2.6
104	Menton-Crinion	15.7	15.9	16.2	16.5	17.0	17.6	18.1	18.6	19.0	19.3	19.5	3.8

TABLE 12. PERCENTILE VALUES FOR U. S. ARMY WOMEN - 1977 (continued)

No.	Measurements	Percentiles in Centimeters										Range (1st-99th)	
		Median											
		1st	2nd	5th	10th	25th	50th	75th	90th	95th	98th		99th
HEAD AND FACE MEASUREMENTS (continued)													
105	Minimum Frontal Breadth	9.5	9.6	9.7	9.9	10.2	10.5	10.9	11.2	11.4	11.6	11.8	2.3
106	Face Breadth (Bizygomatic)	11.9	12.0	12.3	12.5	12.9	13.2	13.6	13.8	14.0	14.3	14.6	2.7
107	Biocular Breadth	8.5	8.7	8.8	9.0	9.3	9.6	10.0	10.3	10.5	10.7	10.8	2.3
108	Interpupillary Breadth	4.9	4.9	5.1	5.2	5.5	5.8	6.1	6.4	6.5	6.7	6.9	2.0
109	Nose Length (Subnas.-Sell.)	3.8	3.9	4.1	4.2	4.4	4.6	4.8	5.0	5.2	5.3	5.3	1.5
110	Nose Breadth	2.6	2.7	2.9	3.0	3.1	3.3	3.6	4.1	4.3	4.5	4.6	2.0
111	Mouth Breadth, Smiling	4.7	4.8	5.0	5.2	5.5	5.9	6.3	6.6	6.8	7.0	7.1	2.4
HAND MEASUREMENTS													
112	Hand Length	15.5	15.7	16.1	16.3	16.8	17.4	18.0	18.7	19.0	19.4	19.6	4.1
113	Palm Length	8.8	8.9	9.0	9.2	9.5	9.9	10.2	10.6	10.8	11.0	11.2	2.4
114	Hand Breadth	7.0	7.0	7.2	7.3	7.6	7.8	8.1	8.3	8.5	8.6	8.7	1.7
115	Hand Circumference	16.5	16.7	17.0	17.3	17.8	18.4	19.0	19.6	19.9	20.2	20.4	3.9

TABLE 12. PERCENTILE VALUES FOR U. S. ARMY WOMEN - 1977 (continued)

No.	Measurements	Percentiles in Centimeters										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		
FOOT MEASUREMENTS													
116	Foot Length	21.6	21.9	22.3	22.8	23.4	24.3	25.1	26.0	26.5	27.1	27.5	5.9
117	Instep Length	15.7	15.9	16.3	16.6	17.2	17.8	18.5	19.1	19.6	20.0	20.4	4.7
118	Foot Breadth	7.7	7.8	8.0	8.2	8.5	8.8	9.2	9.5	9.7	10.0	10.2	2.5
119	Heel Breadth	5.2	5.3	5.5	5.6	5.8	6.1	6.4	6.6	6.8	7.0	7.2	2.0
120	Ball of Foot Circumference	20.1	20.4	20.8	21.1	21.8	22.6	23.4	24.1	24.5	25.1	25.6	5.5
121	Instep Circumference	20.8	21.1	21.5	21.9	22.6	23.4	24.3	25.1	25.7	26.3	26.8	6.0
122	Heel-Ankle Circumference	27.7	28.0	28.5	29.0	29.8	30.7	31.7	32.7	33.3	34.0	34.6	6.9
123	Ankle Height	8.7	8.9	9.2	9.6	10.2	10.8	11.5	12.1	12.6	13.2	13.7	5.0
124	Sphyrion Height	5.2	5.3	5.6	5.8	6.1	6.5	6.8	7.1	7.3	7.6	7.7	2.5
SKINFOLD THICKNESS MEASUREMENTS													
125	Subscapular Skinfold			0.70	0.77	0.99	1.27	1.69	2.46	2.72			
126	Triceps Skinfold			0.94	1.11	1.43	1.77	2.07	2.36	2.58			
127	Biceps Skinfold			0.30	0.38	0.58	0.78	1.10	1.32	1.51			
128	Suprailiac Skinfold			0.70	0.86	1.18	1.62	2.15	2.68	3.02			
	Age (years)	17.2	17.4	17.7	18.0	19.1	22.0	25.1	29.3	33.6	40.0	45.7	28.5

Mean Age - 23.10 years Number of women - 1331

d. Tables of Statistical and Percentile Values in Inches

In the following twelve summary tables of anthropometric data, statistical and percentile values are presented for: U. S. Army men — 1946, U. S. Army men — 1966, U. S. Army men (basic trainees) — 1966, U. S. Army men (basic trainees) — 1977, U. S. Army women — 1946, and U. S. Army women — 1977. However due to the small size of the sample (287 men), only selected percentile values between the 5th and the 95th percentiles are given for the 1977 U. S. Army basic trainees.

Values are expressed in inches for all of the body measurements, while weight is shown in pounds and age is given in years.

The body measurements in these tables are grouped under the following headings: Weight, Standing Measurements, Sitting Measurements, Depth and Breadth Measurements, Circumferences, Limb Circumferences, Surface Measurements, Head and Face Measurements, Hand Measurements, Foot Measurements, and Age.

TABLE 13. STATISTICAL VALUES FOR U. S. ARMY MEN - 1946

No.	Measurements	N	Mean	Values in Inches					Range		Stature ratio
				SE(M)	S.D.	SE(SD)	V(%)	Min.	Max.	Total	
1	Weight (pounds)	24,506	154.81	0.13	20.56	0.09	13.28	95.0	305.0	210.0	
STANDING MEASUREMENTS											
2	Stature	24,508	68.47	0.02	2.52	0.01	3.68	59.1	78.7	19.6	1.000
3	Cervicale Height	21,141	58.74	0.02	2.38	0.01	4.05	50.0	68.9	18.9	.858
4	Waist (Iliocristale) Height	24,469	41.56	0.01	1.96	0.01	4.72	32.7	50.0	17.3	.607
5	Crotch Length	24,497	32.84	0.01	1.75	0.01	5.33	25.6	39.8	14.2	.480
6	Thigh Length	24,625	15.03	0.01	1.31	0.01	8.72	9.1	21.6	12.5	.220
7	Tibiale Height	24,664	17.94	0.01	1.12	0.00	6.24	14.0	23.4	9.4	.262
8	Shoulder-Fingertip Length	24,449	30.48	0.01	1.39	0.01	4.56	24.0	36.6	12.6	.445
SITTING MEASUREMENTS											
9	Sitting Height	24,352	35.78	0.01	1.34	0.01	3.74	30.3	41.3	11.0	.522
10	Trunk Height, Sitting	24,715	23.01	0.01	1.17	0.01	5.08	17.7	27.2	9.5	.336
11	Acromiale-Radiale Length	24,348	13.13	0.00	0.75	0.00	5.71	9.2	15.9	6.7	.192
12	Shoulder-Elbow Length	24,556	14.28	0.01	0.81	0.00	5.67	9.8	19.3	9.5	.208
13	Elbow-Fingertip Length	24,354	18.73	0.01	0.88	0.00	4.70	14.8	23.4	8.6	.274
14	Knee Height, Sitting	24,419	21.62	0.01	1.09	0.00	5.04	15.4	27.2	11.8	.316
15	Buttock-Knee Length	24,244	23.40	0.01	1.12	0.01	4.79	19.3	28.0	8.7	.342
DEPTH AND BREADTH MEASUREMENTS											
16	Chest Depth	24,558	8.33	0.00	0.75	0.00	9.00	5.3	12.8	7.5	.122
17	Trunk Depth	24,558	9.09	0.01	0.81	0.00	8.91	6.5	14.0	7.5	.133
18	Shoulder (Bideltoide) Breadth	24,461	17.95	0.01	0.99	0.00	5.52	13.8	23.2	9.4	.262
19	Chest Breadth	24,574	11.14	0.00	0.77	0.00	6.91	8.1	15.2	7.1	.163
20	Bi-iliac Breadth	24,518	11.46	0.00	0.79	0.00	6.89	8.9	15.9	7.0	.167
21	Elbow-Elbow Breadth	24,590	17.54	0.01	1.54	0.01	8.78	13.6	24.2	10.6	.256
22	Hip Breadth, Sitting	24,575	13.95	0.01	0.90	0.00	6.45	11.2	19.9	8.7	.204

TABLE 13. STATISTICAL VALUES FOR U. S. ARMY MEN - 1946 (continued)

No.	Measurements	N	Mean	SE(M)	S.D.	SE(SD)	V(%)	Values in Inches		Stature ratio
								Min.	Range Max.	
CIRCUMFERENCES										
23	Neck Circumference	24,423	14.46	0.00	0.73	0.00	5.05	11.6	19.1	.211
24	Shoulder Circumference	3,409	43.26	0.04	2.51	0.03	5.80	35.4	54.3	.632
25	Chest Circumference	24,470	36.38	0.01	2.34	0.01	6.43	28.0	48.4	.531
26	Waist Circumference	24,472	30.60	0.02	2.76	0.01	9.02	23.2	46.8	.447
27	Hip (Buttock) Circumference	24,500	36.67	0.01	2.24	0.01	6.11	26.4	50.0	.536
28	Vert. Trunk Circum., Sitting	24,388	62.08	0.02	2.66	0.01	4.28	49.8	75.0	.907
LIMB CIRCUMFERENCES										
29	Scye Circumference	24,383	17.09	0.01	1.17	0.01	6.85	13.9	22.2	.250
30	Axillary Arm Circumference	24,729	12.14	0.01	1.07	0.00	8.81	8.4	15.8	.177
31	Biceps Circum., Relaxed	24,446	11.05	0.01	0.93	0.00	8.42	8.0	15.4	.161
32	Lower Upper Arm Circum.	24,769	9.87	0.00	0.74	0.00	7.50	7.6	14.7	.144
33	Forearm Circum., Relaxed	24,491	10.54	0.00	0.64	0.00	6.07	8.0	13.5	.154
34	Mid-Forearm Circumference	24,492	9.50	0.01	0.88	0.00	9.26	6.0	13.1	.139
35	Wrist Circumference	24,391	6.70	0.00	0.40	0.00	5.97	5.3	8.3	.098
36	Upper Thigh Circumference	24,832	21.44	0.01	1.70	0.01	7.93	16.2	27.7	.313
37	Mid-Thigh Circumference	24,446	19.28	0.01	1.56	0.01	8.09	15.1	26.5	.282
38	Lower Thigh Circumference	24,711	14.72	0.01	1.05	0.00	7.13	11.5	19.8	.215
39	Upper Leg Circumference	24,456	13.23	0.01	0.84	0.00	6.35	10.3	17.0	.193
40	Calf Circumference	24,686	14.08	0.01	0.94	0.00	6.68	10.7	18.6	.206
41	Ankle Circumference	24,297	10.36	0.00	0.57	0.00	5.50	8.1	13.4	.151
SURFACE MEASUREMENTS										
42	Shoulder Length	24,453	6.05	0.00	0.67	0.00	11.07	4.0	8.4	.088
43	Interscye, Back	24,432	14.82	0.01	1.18	0.01	7.96	9.6	19.9	.216
44	Sleeve Length	24,470	31.89	0.01	1.73	0.01	5.42	24.8	39.0	.466
45	Crotch Length	24,434	28.47	0.01	2.24	0.01	7.87	20.1	39.0	.416

TABLE 13. STATISTICAL VALUES FOR U. S. ARMY MEN - 1946 (continued)

No.	Measurements	N	Mean	SE(M)	S.D.	SE(SD)	V(%)	Values in Inches			Stature ratio
								Min.	Max.	Total	
HEAD AND FACE MEASUREMENTS											
46	Head Circumference	24,466	22.30	0.00	0.62	0.00	2.78	19.50	25.00	5.50	.326
47	Head Length	24,471	7.67	0.00	0.28	0.00	3.65	6.10	9.06	2.96	.112
48	Ectocanthus-Otobasion Sup.	24,478	3.36	0.00	0.21	0.00	6.25	2.36	4.33	1.97	.049
49	Head Breadth	24,447	5.99	0.00	0.23	0.00	3.84	4.92	7.09	2.17	.087
50	Head Height (Trag.-t. of h.)	24,630	5.16	0.00	0.24	0.00	4.65	3.94	6.30	2.36	.075
51	Face Length (Menton-Sellion)	24,494	4.92	0.00	0.28	0.00	5.69	3.94	6.30	2.36	.072
52	Minimum Frontal Breadth	24,406	4.30	0.00	0.23	0.00	5.35	3.54	5.91	2.37	.063
53	Face Breadth (Bizygomatic)	24,389	5.47	0.00	0.24	0.00	4.39	4.33	6.50	2.17	.080
54	Bigonial Breadth	24,432	4.24	0.00	0.24	0.00	5.66	3.15	5.71	2.56	.062
55	Biocular Breadth	24,361	3.63	0.00	0.20	0.00	5.51	2.76	4.72	1.96	.053
56	Interocular Breadth	24,359	1.27	0.00	0.12	0.00	9.45	0.81	1.91	1.10	.018
57	Nose Length (Subnas.-Sell.)	24,411	2.18	0.00	0.20	0.00	9.17	1.52	3.09	1.57	.032
58	Nasal Root Breadth	24,348	0.56	0.00	0.09	0.00	16.07	0.26	1.04	0.78	.008
59	Nose Breadth	24,382	1.33	0.00	0.11	0.00	8.27	0.81	2.15	1.34	.019
HAND MEASUREMENTS											
60	Hand Length	24,487	7.58	0.00	0.36	0.00	4.75	5.91	9.06	3.15	.111
61	Hand Breadth	24,488	3.41	0.00	0.19	0.00	5.57	2.36	4.33	1.97	.050
FOOT MEASUREMENTS											
62	Foot Length	24,372	10.44	0.00	0.48	0.00	4.60	8.27	12.01	3.74	.152
63	Instep Length	24,475	7.61	0.00	0.44	0.00	5.78	5.51	9.65	4.14	.111
64	Foot Breadth	24,466	3.86	0.00	0.25	0.00	6.48	2.56	5.12	2.56	.056
65	Heel Breadth	24,341	2.64	0.00	0.21	0.00	7.95	1.58	3.94	2.36	.038
66	Ball of Foot Circumference	24,468	9.70	0.00	0.50	0.00	5.15	7.87	11.81	3.94	.142
Age (years)											
		24,502	24.28	0.03	4.94	0.02	20.35	15.0	57.0	42.0	

TABLE 14. PERCENTILE VALUES FOR U. S. ARMY MEN - 1946

No.	Measurements	Percentiles in Inches										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		99th
STANDING MEASUREMENTS													
1	Weight (pounds)	114.4	118.0	124.3	130.0	141.0	152.9	167.0	181.0	191.7	205.0	214.9	100.5
STANDING MEASUREMENTS													
2	Stature	62.7	63.3	64.3	65.3	66.8	68.5	70.2	71.8	72.6	73.7	74.5	11.8
3	Cervicale Height	53.2	53.8	54.8	55.7	57.1	58.7	60.3	61.8	62.7	63.7	64.4	11.2
4	Waist (Iliocristale) Height	37.1	37.5	38.3	39.0	40.2	41.5	42.9	44.0	44.8	45.7	46.3	9.2
5	Crotch Height	28.8	29.3	30.0	30.6	31.7	32.8	34.0	35.1	35.8	36.6	37.2	8.4
6	Thigh Length	11.9	12.2	12.8	13.3	14.1	15.0	15.9	16.7	17.2	17.8	18.2	6.3
7	Tibiale Height	15.4	15.7	16.2	16.5	17.2	17.9	18.7	19.4	19.9	20.4	20.8	5.4
8	Shoulder-Fingertip Length	27.2	27.6	28.2	28.7	29.5	30.5	31.4	32.3	32.8	33.4	33.8	6.6
SITTING MEASUREMENTS													
9	Sitting Height	32.5	32.9	33.5	34.0	34.8	35.8	36.7	37.5	38.0	38.6	39.0	6.5
10	Trunk Height, Sitting	20.1	20.4	21.0	21.4	22.2	23.0	23.8	24.5	25.0	25.5	25.8	5.7
11	Acromiale-Radiale Length	11.4	11.6	11.9	12.1	12.6	13.1	13.6	14.1	14.4	14.7	14.9	3.5
12	Shoulder-Elbow Length	12.3	12.5	12.9	13.2	13.7	14.3	14.8	15.3	15.6	16.0	16.3	4.0
13	Elbow-Fingertip Length	16.6	16.9	17.3	17.6	18.1	18.7	19.3	19.8	20.1	20.5	20.8	4.2
14	Knee Height, Sitting	19.0	19.3	19.8	20.2	20.9	21.6	22.4	23.1	23.5	24.0	24.3	5.3
15	Buttock-Knee Length	20.7	21.0	21.5	21.9	22.6	23.4	24.2	24.8	25.2	25.7	26.0	5.3

TABLE 14. PERCENTILE VALUES FOR U. S. ARMY MEN - 1946 (continued)

No.	Measurements	Percentiles in Inches										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		99th
DEPTH AND BREADTH MEASUREMENTS													
16	Chest Depth	6.8	6.9	7.2	7.4	7.8	8.3	8.8	9.3	9.6	10.1	10.5	3.7
17	Trunk Depth	7.5	7.6	7.9	8.1	8.5	9.0	9.5	10.1	10.5	11.1	11.5	4.0
18	Shoulder (Bidel.) Breadth	15.8	16.0	16.4	16.7	17.3	17.9	18.6	19.2	19.6	20.2	20.6	4.8
19	Chest Breadth	9.3	9.6	10.0	10.2	10.6	11.1	11.6	12.1	12.4	12.8	13.2	3.9
20	Bi-iliac Breadth	9.7	9.9	10.3	10.5	10.9	11.4	12.0	12.5	12.8	13.3	13.6	3.9
21	Elbow-Elbow Breadth	14.4	14.7	15.3	15.7	16.5	17.4	18.4	19.5	20.3	21.1	21.8	7.4
22	Hip Breadth, Sitting	12.2	12.4	12.7	12.9	13.4	13.9	14.5	15.1	15.5	16.2	16.7	4.5
CIRCUMFERENCES													
23	Neck Circumference	12.8	13.0	13.3	13.5	13.9	14.4	14.9	15.4	15.7	16.1	16.4	3.6
24	Shoulder Circumference	38.0	38.4	39.2	40.0	41.2	42.6	44.1	45.6	46.6	47.7	48.5	10.5
25	Chest Circumference	31.6	32.1	32.9	33.6	34.8	36.2	37.8	39.4	40.5	41.9	43.0	11.4
26	Waist Circumference	25.6	26.1	26.9	27.5	28.7	30.2	32.0	34.1	35.8	37.7	39.1	13.5
27	Hip (Buttock) Circumference	31.7	32.3	33.3	34.0	35.1	36.5	38.0	39.5	40.5	41.8	42.8	11.1
28	Vert. Trunk Circum., Sit.	55.8	56.6	57.8	58.7	60.2	62.0	63.8	65.5	66.6	68.0	69.0	13.2

TABLE 14. PERCENTILE VALUES FOR U. S. ARMY MEN - 1946 (continued)

No.	Measurements	Percentiles in Inches										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		
LIMB CIRCUMFERENCES													
29	Soye Circumference	14.5	14.8	15.3	15.7	16.3	17.0	17.8	18.6	19.1	19.7	20.1	5.6
30	Axillary Arm Circumference	9.9	10.1	10.5	10.8	11.4	12.1	12.8	13.5	14.0	14.6	15.0	5.1
31	Biceps Circum., Relaxed	9.1	9.3	9.6	9.9	10.4	11.0	11.6	12.3	12.7	13.2	13.5	4.4
32	Lower Upper Arm Circum.	8.3	8.4	8.7	8.9	9.3	9.8	10.3	10.8	11.2	11.6	11.9	3.6
33	Forearm Circum., Relaxed	9.0	9.2	9.5	9.7	10.1	10.5	10.9	11.3	11.6	11.9	12.1	3.1
34	Mid-Forearm Circumference	7.5	7.7	8.0	8.3	8.9	9.5	10.1	10.7	11.0	11.4	11.6	4.1
35	Wrist Circumference	5.8	5.9	6.0	6.2	6.4	6.7	7.0	7.3	7.4	7.6	7.7	1.9
36	Upper Thigh Circumference	17.9	18.2	18.8	19.3	20.2	21.3	22.5	23.7	24.5	25.4	26.0	8.1
37	Mid-Thigh Circumference	16.0	16.3	16.8	17.3	18.2	19.2	20.3	21.6	22.0	22.7	23.2	7.2
38	Lower Thigh Circumference	12.5	12.7	13.1	13.4	14.0	14.7	15.4	16.1	16.6	17.2	17.6	5.1
39	Upper Leg Circumference	11.5	11.6	11.9	12.2	12.6	13.2	13.8	14.3	14.7	15.2	15.5	4.0
40	Calf Circumference	12.0	12.2	12.6	12.9	13.4	14.0	14.6	15.3	15.6	16.2	16.5	4.5
41	Ankle Circumference	9.1	9.2	9.4	9.6	9.9	10.3	10.7	11.1	11.3	11.6	11.8	2.7

TABLE 14. PERCENTILE VALUES FOR U. S. ARMY MEN - 1946 (continued)

No.	Measurements	Percentiles in Inches										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		
SURFACE MEASUREMENTS													
42	Shoulder Length	4.3	4.5	4.9	5.2	5.6	6.1	6.5	6.9	7.1	7.4	7.5	3.2
43	Interscye, Back	12.1	12.4	12.9	13.3	14.0	14.8	15.6	16.3	16.8	17.3	17.7	5.6
44	Sleeve Length	27.9	28.2	29.1	29.7	30.7	31.9	33.1	34.1	34.8	35.5	36.0	8.1
45	Crotch Length	23.6	24.1	25.0	25.7	26.9	28.3	29.8	31.3	32.3	34.0	35.5	11.9
HEAD AND FACE MEASUREMENTS													
46	Head Circumference	20.87	21.05	21.30	21.50	21.88	22.29	22.73	23.10	23.36	23.65	23.84	2.97
47	Head Length	7.01	7.09	7.21	7.31	7.48	7.67	7.86	8.03	8.13	8.24	8.33	1.32
48	Ectocanthus-Otobasion Sup.	2.87	2.94	3.04	3.11	3.23	3.36	3.51	3.64	3.72	3.79	3.84	0.97
49	Head Breadth	5.43	5.51	5.62	5.70	5.84	5.99	6.14	6.29	6.38	6.49	6.56	1.13
50	Head Height (Trag.-t. of h.)	4.58	4.66	4.78	4.86	5.00	5.15	5.32	5.48	5.58	5.70	5.78	1.20
51	Face Length (Menton-Sellion)	4.27	4.35	4.47	4.56	4.72	4.91	5.11	5.29	5.40	5.52	5.60	1.33
52	Minimum Frontal Breadth	3.78	3.83	3.92	4.00	4.14	4.30	4.46	4.61	4.70	4.82	4.90	1.12
53	Face Breadth (Bizygomatic)	4.87	4.95	5.07	5.16	5.31	5.48	5.63	5.77	5.86	5.95	6.01	1.14
54	Bigonial Breadth	3.68	3.75	3.86	3.94	4.08	4.23	4.39	4.53	4.62	4.75	4.83	1.15

TABLE 14. PERCENTILE VALUES FOR U. S. ARMY MEN - 1946 (continued)

No.	Measurements	Percentiles in Inches										Range 99th (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		
HEAD AND FACE MEASUREMENTS (continued)													
55	Biocular Breadth	3.14	3.20	3.29	3.35	3.48	3.62	3.78	3.90	3.99	4.08	4.15	1.01
56	Interocular Breadth	1.00	1.05	1.09	1.13	1.20	1.27	1.35	1.43	1.49	1.58	1.62	0.62
57	Nose Length (Subnas.-Sell.)	1.72	1.78	1.88	1.94	2.04	2.16	2.30	2.43	2.51	2.62	2.69	0.97
58	Nasal Root Breadth	0.38	0.39	0.41	0.44	0.50	0.56	0.63	0.69	0.73	0.77	0.80	0.42
59	Nose Breadth	1.09	1.12	1.17	1.20	1.25	1.32	1.40	1.48	1.53	1.58	1.62	0.53
HAND MEASUREMENTS													
60	Hand Length	6.74	6.84	7.00	7.12	7.33	7.57	7.81	8.04	8.18	8.35	8.47	1.73
61	Hand Breadth	2.95	3.01	3.09	3.16	3.28	3.41	3.55	3.67	3.75	3.83	3.88	0.93
FOOT MEASUREMENTS													
62	Foot Length	9.31	9.45	9.65	9.82	10.12	10.44	10.77	11.07	11.24	11.42	11.54	2.23
63	Instep Length	6.54	6.68	6.88	7.05	7.33	7.62	7.90	8.18	8.33	8.53	8.68	2.14
64	Foot Breadth	3.27	3.34	3.46	3.55	3.70	3.86	4.03	4.18	4.27	4.37	4.44	1.17
65	Heel Breadth	2.14	2.20	2.30	2.37	2.49	2.63	2.78	2.92	3.00	3.13	3.21	1.07
66	Ball of Foot Circumference	8.55	8.68	8.88	9.05	9.35	9.69	10.05	10.35	10.55	10.77	10.92	2.37

Mean Age - 24.28 years Number of men - 25,000

TABLE 15. STATISTICAL VALUES FOR U. S. ARMY MEN - 1966

No.	Measurements	N	Mean	SE(M)	S.D.	SE(SD)	V(%)	Values in Inches		Stature ratio
								Min.	Max.	
1	Weight (pounds)	6677	159.10	0.29	23.35	0.20	14.68	99.5	283.5	184.0
STANDING MEASUREMENTS										
2	Stature	6682	68.71	0.03	2.60	0.02	3.79	59.7	78.6	1.000
3	Cervicale Height	6682	58.88	0.03	2.50	0.02	4.24	50.3	68.4	.857
4	Shoulder (Acromiale) Height	6682	56.58	0.03	2.45	0.02	4.33	48.5	65.8	.823
5	Waist (Iliocristale) Height	6682	41.86	0.03	2.11	0.02	5.05	34.0	49.7	.609
6	Crotch Height	6682	33.05	0.02	1.84	0.02	5.57	25.5	40.0	.481
7	Kneecap (Patella) Height	6682	20.81	0.02	1.28	0.01	6.14	16.8	25.3	.303
8	Calf Height	6682	13.94	0.01	1.06	0.01	7.62	9.4	18.8	.203
9	Functional (Thumb-Tip) Reach	6682	32.52	0.02	1.91	0.02	5.87	25.7	39.5	.473
SITTING MEASUREMENTS										
10	Vertical Reach, Sitting	6682	54.42	0.03	2.28	0.02	4.20	46.0	63.3	.792
11	Sitting Height	6682	35.70	0.02	1.44	0.01	4.04	30.4	40.6	.520
12	Eye Height, Sitting	6682	30.99	0.02	1.41	0.01	4.53	25.9	36.5	.451
13	Mid-Shoulder Height, Sitting	6682	24.56	0.02	1.25	0.01	5.09	20.0	28.8	.357
14	Shoulder-Elbow Length	6682	14.52	0.01	0.73	0.01	5.05	11.7	17.2	.211
15	Elbow-Fingertip Length	6682	18.88	0.01	0.91	0.01	4.81	15.4	22.7	.275
16	Knee Height, Sitting	6682	21.28	0.01	1.08	0.01	5.05	17.4	25.5	.310
17	Popliteal Height, Sitting	6682	17.56	0.01	0.98	0.01	5.60	14.1	21.5	.256
18	Buttock-Knee Length	6682	23.41	0.01	1.12	0.01	4.80	19.6	28.0	.341
19	Buttock-Popliteal Length	6682	19.62	0.01	0.99	0.01	5.02	16.2	23.1	.286
BREATH MEASUREMENTS										
20	Chest Depth	6682	9.12	0.01	0.79	0.01	8.61	6.5	13.4	.133
21	Chest Breadth	6682	12.04	0.01	0.84	0.01	7.02	9.6	16.4	.175
22	Hip Breadth, Standing	6682	13.07	0.01	0.79	0.01	6.05	10.6	17.7	.190
23	Shoulder (Bideltoide) Breadth	6682	17.86	0.01	1.00	0.01	5.59	14.3	23.1	.260
24	Forearm-Forearm Breadth	6682	18.10	0.02	1.66	0.01	9.17	13.1	26.1	.263
25	Hip Breadth, Sitting	6682	13.45	0.01	0.94	0.01	6.97	10.3	19.8	.196

TABLE 15. STATISTICAL VALUES FOR U. S. ARMY MEN - 1966 (continued)

Values in Inches										
No.	Measurements	N	Mean	SE(M)	S.D.	SE(SD)	V(%)	Range		Stature ratio
								Min.	Max.	
CIRCUMFERENCES										
26	Neck Circumference	6681	14.72	0.01	0.81	0.01	5.53	11.9	19.1	.214
27	Shoulder Circumference	6682	44.55	0.03	2.51	0.02	5.64	36.5	57.2	.648
28	Chest Circumference	6682	36.92	0.03	2.63	0.02	7.13	28.2	48.9	.537
29	Waist Circumference	6682	31.61	0.04	3.22	0.03	10.19	23.1	50.3	.460
30	Hip (Buttock) Circumference	6682	37.09	0.03	2.46	0.02	6.63	30.4	52.8	.540
31	Vert. Trunk Circum., Standing	6682	64.61	0.04	3.34	0.03	5.17	53.2	78.6	.940
LIMB CIRCUMFERENCES										
32	Scye Circumference	6682	17.54	0.02	1.28	0.01	7.32	12.7	23.7	.255
33	Biceps Circum., Relaxed	6682	11.59	0.01	1.08	0.01	9.29	8.2	17.4	.169
34	Biceps Circum., Flexed	6682	12.70	0.01	1.08	0.01	8.52	9.0	17.8	.185
35	Forearm Circum., Flexed	6682	11.59	0.01	0.85	0.01	7.31	8.9	16.3	.169
36	Wrist Circumference	6682	6.72	0.00	0.34	0.00	5.13	5.4	8.5	.098
37	Upper Thigh Circumference	6682	21.82	0.02	1.89	0.02	8.66	15.3	30.6	.318
38	Lower Thigh Circumference	6682	15.89	0.02	1.52	0.01	9.58	11.3	22.3	.231
39	Calf Circumference	6682	14.41	0.01	1.05	0.01	7.29	11.1	20.0	.210
40	Ankle Circumference	6682	8.93	0.01	0.57	0.00	6.34	7.1	12.1	.130
SURFACE MEASUREMENTS										
41	Shoulder Length	6682	6.38	0.01	0.78	0.01	12.25	3.4	9.6	.093
42	Interscye, Back	6682	15.39	0.02	1.24	0.01	8.07	10.7	20.4	.224
43	Interscye, Maximum	6682	20.72	0.02	1.46	0.01	7.03	15.8	26.5	.302
44	Waist Back Length	6682	17.73	0.02	1.35	0.01	7.64	13.5	22.9	.258
45	Sleeve Inseam Length	6682	19.13	0.01	1.05	0.01	5.51	15.4	23.5	.278
46	Sleeve Length	6682	33.80	0.02	1.56	0.01	4.61	27.7	39.5	.492

TABLE 15. STATISTICAL VALUES FOR U. S. ARMY MEN - 1966 (continued)

No.	Measurements	N	Mean	SE(M)	S.D.	Values in Inches			V(%)	Range		Stature ratio
						SE(SD)	Min.	Max.		Min.	Total	
HEAD AND FACE MEASUREMENTS												
47	Head Circumference	6682	22.09	0.01	0.63	0.01	20.06	25.13	2.86	20.06	5.07	.321
48	Head Length	6682	7.66	0.00	0.29	0.00	6.56	8.83	3.77	6.56	2.27	.111
49	Sellion to back of head	6682	7.52	0.00	0.28	0.00	6.48	8.67	3.77	6.48	2.19	.109
50	Pronasale to back of head	6682	8.74	0.00	0.33	0.00	7.42	10.01	3.75	7.42	2.59	.127
51	Ectocanthus to back of head	6682	6.79	0.00	0.38	0.00	5.45	8.20	5.67	5.45	2.75	.099
52	Tragion to back of head	6682	4.05	0.01	0.47	0.00	11.58	5.76	11.58	2.70	3.06	.059
53	Head Breadth	6682	6.01	0.00	0.23	0.00	3.83	6.86	3.83	5.06	1.80	.087
54	Bitragion Breadth	6682	5.31	0.00	0.22	0.00	4.47	6.15	4.18	4.47	1.68	.077
55	Head Height (Tragion-t. of h.)	6682	5.21	0.00	0.31	0.00	3.96	6.31	5.99	3.96	2.35	.076
56	Face Length (Menton-Sellion)	6681	4.74	0.00	0.26	0.00	3.80	5.76	5.50	3.80	1.96	.069
57	Face Breadth (Bizygomatic)	6681	5.51	0.00	0.22	0.00	4.70	6.43	4.00	4.70	1.73	.080
58	Interpupillary Breadth	6680	2.41	0.00	0.16	0.00	1.87	3.12	6.51	1.87	1.25	.035
HAND MEASUREMENTS												
59	Hand Length	6682	7.49	0.00	0.38	0.00	6.08	9.30	5.06	6.08	3.22	.109
60	Palm Length	6682	4.17	0.00	0.25	0.00	3.17	5.29	5.93	3.17	2.12	.061
61	Hand Breadth	6681	3.50	0.00	0.19	0.00	2.78	4.22	5.52	2.78	1.44	.051
62	Hand Circumference	6682	8.51	0.01	0.45	0.00	6.99	10.36	5.26	6.99	3.37	.124
63	Thumb Crotch Length	6682	1.96	0.00	0.20	0.00	1.28	2.96	10.45	1.28	1.68	.028
FOOT MEASUREMENTS												
64	Foot Length	6682	10.54	0.01	0.51	0.00	8.41	12.77	4.86	8.41	4.36	.153
65	Instep Length	6682	7.73	0.01	0.41	0.00	6.36	9.66	5.32	6.36	3.30	.112
66	Foot Breadth	6682	3.87	0.00	0.22	0.00	3.13	4.81	5.56	3.13	1.68	.056
67	Heel Breadth	6682	2.70	0.00	0.18	0.00	1.99	3.55	6.84	1.99	1.56	.039
68	Ball of Foot Circumference	6682	9.85	0.01	0.58	0.01	7.30	12.37	5.92	7.30	5.07	.143
69	Instep Circumference	6682	10.46	0.01	0.65	0.01	8.05	14.18	6.21	8.05	6.13	.152
70	Heel-Ankle Circumference	6682	13.43	0.01	0.65	0.01	11.08	16.03	4.86	11.08	4.95	.195
	Age (years)	6682	22.17	0.06	4.64	0.04	17.0	55.0	20.92	17.0	38.0	

TABLE 16. PERCENTILE VALUES FOR U. S. ARMY MEN - 1966

No.	Measurements	Percentiles in Inches										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		99th
1	Weight (pounds)	116.0	120.1	126.3	132.1	142.6	156.3	172.6	190.1	201.9	216.5	226.9	110.9
STANDING MEASUREMENTS													
2	Stature	62.6	63.4	64.5	65.4	67.0	68.7	70.4	72.1	73.1	74.2	74.9	12.3
3	Cervicale Height	52.9	53.7	54.8	55.8	57.2	58.8	60.6	62.1	63.0	64.0	64.6	11.7
4	Shoulder (Acromiale) Height	50.9	51.6	52.6	53.5	54.9	56.6	58.2	59.8	60.7	61.7	62.4	11.5
5	Maist (Iliocristale) Height	36.8	37.4	38.4	39.2	40.5	41.9	43.3	44.5	45.3	46.3	46.9	10.1
6	Crotch Height	28.6	29.2	30.0	30.7	31.8	33.0	34.3	35.4	36.1	36.9	37.4	8.8
7	Kneecap (Patella) Height	17.9	18.2	18.8	19.2	19.9	20.8	21.7	22.5	23.0	23.5	23.9	6.0
8	Calf Height	11.5	11.8	12.2	12.6	13.2	13.9	14.6	15.3	15.7	16.2	16.5	5.0
9	Functional (Thumb-Tip) Reach	28.3	28.8	29.5	30.1	31.2	32.5	33.8	35.0	35.8	36.7	37.2	8.9
SITTING MEASUREMENTS													
10	Vertical Reach, Sitting	49.1	49.7	50.7	51.5	52.9	54.4	55.9	57.3	58.2	59.3	60.1	11.0
11	Sitting Height	32.3	32.7	33.3	33.8	34.7	35.7	36.7	37.6	38.1	38.6	39.0	6.7
12	Eye Height, Sitting	27.6	28.0	28.6	29.2	30.1	31.0	32.0	32.8	33.3	33.9	34.3	6.7
13	Mid-Shoulder Height, Sitting	21.5	21.9	22.5	23.0	23.7	24.6	25.4	26.2	26.6	27.1	27.4	5.9
14	Shoulder-Elbow Length	12.8	13.0	13.3	13.6	14.0	14.5	15.0	15.5	15.7	16.1	16.3	3.5
15	Elbow-Fingertip Length	16.8	17.1	17.4	17.8	18.3	18.8	19.5	20.1	20.4	20.9	21.2	4.4

TABLE 16. PERCENTILE VALUES FOR U. S. ARMY MEN - 1966 (continued)

No.	Measurements	Percentiles in Inches										Range (1st-99th)	
		1st	2nd	5th	10th	25th	median 50th	75th	90th	95th	98th		99th
SITTING MEASUREMENTS (continued)													
16	Knee Height, Sitting	18.8	19.1	19.6	20.0	20.6	21.3	22.0	22.7	23.1	23.6	23.9	5.1
17	Popliteal Height, Sitting	15.3	15.6	16.0	16.3	16.9	17.5	18.2	18.8	19.2	19.6	19.9	4.6
18	Buttock-Knee Length	20.8	21.2	21.6	22.0	22.6	23.4	24.1	24.9	25.3	25.8	26.2	5.4
19	Buttock-Popliteal Length	17.3	17.6	18.0	18.4	19.0	19.6	20.3	20.9	21.3	21.7	22.0	4.7
BREATH MEASUREMENTS													
20	Chest Depth	7.6	7.7	8.0	8.2	8.6	9.1	9.6	10.1	10.5	11.0	11.4	3.8
21	Chest Breadth	10.3	10.5	10.8	11.0	11.4	12.0	12.6	13.1	13.5	14.0	14.3	4.0
22	Hip Breadth, Standing	11.4	11.6	11.9	12.1	12.5	13.0	13.6	14.1	14.5	14.9	15.2	3.8
23	Shoulder (Bideltoïd) Breadth	15.7	16.0	16.3	16.6	17.2	17.8	18.5	19.2	19.6	20.1	20.5	4.8
24	Forearm-Forearm Breadth	14.9	15.2	15.7	16.1	16.9	18.0	19.1	20.3	21.1	22.0	22.7	7.8
25	Hip Breadth, Sitting	11.6	11.8	12.1	12.3	12.8	13.4	14.0	14.7	15.1	15.6	16.0	4.4
CIRCUMFERENCES													
26	Neck Circumference	13.0	13.2	13.5	13.7	14.2	14.7	15.2	15.8	16.1	16.5	16.8	3.8
27	Shoulder Circumference	39.3	39.8	40.7	41.5	42.8	44.4	46.1	47.8	48.9	50.3	51.3	12.0
28	Chest Circumference	31.8	32.4	33.1	33.8	35.1	36.6	38.5	40.4	41.7	43.3	44.4	12.6
29	Waist Circumference	26.1	26.7	27.4	28.1	29.3	31.0	33.4	36.0	37.8	40.0	41.6	15.5

TABLE 16. PERCENTILE VALUES FOR U. S. ARMY MEN - 1966 (continued)

No.	Measurements	Percentiles in Inches										Range 99th (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		
CIRCUMFERENCES (continued)													
30	Hip (Buttock) Circumference	32.3	32.8	33.5	34.2	35.4	36.8	38.6	40.4	41.6	43.0	44.1	11.8
31	Vert. Trunk Circum., Stand.	57.2	53.1	59.3	60.4	62.3	64.5	66.7	68.9	70.3	72.0	73.2	16.0
LIMB CIRCUMFERENCES													
32	Scye Circumference	14.8	15.1	15.6	16.0	16.7	17.4	18.3	19.2	19.8	20.6	21.2	6.4
33	Biceps Circum., Relaxed	9.4	9.6	10.0	10.3	10.8	11.5	12.3	13.0	13.5	14.0	14.4	5.0
34	Biceps Circum., Flexed	10.4	10.7	11.0	11.4	12.0	12.6	13.4	14.1	14.6	15.1	15.5	5.1
35	Forearm Circum., Flexed	9.8	10.0	10.3	10.5	11.0	11.6	12.1	12.7	13.0	13.5	13.8	4.0
36	Wrist Circumference	5.9	6.0	6.2	6.3	6.5	6.7	6.9	7.2	7.3	7.5	7.6	1.7
37	Upper Thigh Circumference	17.9	18.3	18.9	19.5	20.5	21.7	23.0	24.3	25.1	26.0	26.6	8.7
38	Lower Thigh Circumference	12.9	13.1	13.6	14.0	14.8	15.8	16.9	18.0	18.6	19.2	19.6	6.7
39	Calf Circumference	12.2	12.4	12.8	13.1	13.7	14.4	15.1	15.8	16.2	16.7	17.1	4.9
40	Ankle Circumference	7.8	7.9	8.1	8.2	8.5	8.9	9.3	9.7	9.9	10.2	10.4	2.6
SURFACE MEASUREMENTS													
41	Shoulder Length	4.4	4.6	5.0	5.3	5.9	6.4	6.9	7.3	7.6	7.8	8.1	3.7
42	Interscye, Back	12.6	12.9	13.4	13.8	14.6	15.4	16.2	17.0	17.4	18.0	18.4	5.8
43	Interscye, Maximum	17.2	17.6	18.3	18.8	19.7	20.7	21.7	22.6	23.1	23.8	24.3	7.1

TABLE 16. PERCENTILE VALUES FOR U. S. ARMY MEN - 1966 (continued)

No.	Measurements	Percentiles in Inches									Range (1st-99th)		
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th		98th	
SURFACE MEASUREMENTS (continued)													
44	Waist Back Length	14.8	15.1	15.6	16.0	16.8	17.7	18.6	19.5	20.0	20.5	20.9	6.1
45	Sleeve Inseam Length	16.7	17.0	17.4	17.8	18.4	19.1	19.8	20.5	20.9	21.4	21.7	5.0
46	Sleeve Length	30.2	30.6	31.3	31.8	32.7	33.8	34.8	35.8	36.4	37.1	37.5	7.3
HEAD AND FACE MEASUREMENTS													
47	Head Circumference	20.63	20.81	21.07	21.30	21.66	22.08	22.51	22.91	23.16	23.43	23.61	2.98
48	Head Length	6.99	7.07	7.19	7.29	7.47	7.67	7.86	8.03	8.14	8.36	8.34	1.35
49	Sellion to back of head	6.84	6.92	7.04	7.15	7.33	7.52	7.71	7.88	7.98	8.09	8.17	1.33
50	Pronasale to back of head	7.94	8.04	8.18	8.31	8.52	8.74	8.96	9.15	9.27	9.40	9.48	1.54
51	Ectocanthus to back of head	5.93	6.03	6.18	6.30	6.52	6.78	7.05	7.30	7.44	7.58	7.66	1.73
52	Tragion to back of head	3.10	3.20	3.33	3.46	3.69	4.01	4.37	4.70	4.87	5.01	5.06	1.96
53	Head Breadth	5.48	5.55	5.65	5.73	5.86	6.00	6.16	6.31	6.40	6.51	6.58	1.10
54	Bitragion Breadth	4.80	4.86	4.95	5.03	5.16	5.31	5.46	5.60	5.69	5.78	5.85	1.05
55	Head Height (Trag.-t. of n.)	4.46	4.56	4.69	4.81	5.00	5.21	5.42	5.61	5.72	5.83	5.90	1.44
56	Face Length (Menton-Sellion)	4.14	4.21	4.31	4.41	4.56	4.73	4.91	5.07	5.17	5.29	5.37	1.23
57	Face Breadth (Bizygomatic)	5.01	5.07	5.15	5.23	5.36	5.51	5.66	5.79	5.88	5.98	6.05	1.04
58	Interpupillary Breadth	2.06	2.10	2.15	2.21	2.31	2.41	2.52	2.61	2.67	2.74	2.80	0.74

TABLE 16. PERCENTILE VALUES FOR U. S. ARMY MEN - 1966 (continued)

No.	Measurements	Percentiles in Inches										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		99th
HAND MEASUREMENTS													
59	Hand Length	6.66	6.75	6.90	7.02	7.23	7.48	7.74	7.98	8.13	8.31	8.44	1.78
60	Palm Length	3.61	3.68	3.77	3.86	4.00	4.16	4.33	4.49	4.59	4.71	4.79	1.18
61	Hand Breadth	3.07	3.12	3.20	3.26	3.37	3.50	3.63	3.75	3.83	3.93	3.99	0.92
62	Hand Circumference	7.53	7.64	7.81	7.95	8.20	8.49	8.79	9.09	9.28	9.49	9.63	2.10
63	Thumb Crotch Length	1.50	1.55	1.63	1.70	1.82	1.95	2.09	2.22	2.30	2.39	2.46	0.90
FOOT MEASUREMENTS													
64	Foot Length	9.37	9.51	9.71	9.89	10.19	10.53	10.87	11.20	11.41	11.65	11.82	2.45
65	Instep Length	6.78	6.89	7.06	7.21	7.46	7.73	8.00	8.25	8.41	8.61	8.76	1.98
66	Foot Breadth	3.39	3.45	3.53	3.61	3.73	3.87	4.01	4.15	4.24	4.34	4.41	1.02
67	Heel Breadth	2.31	2.36	2.42	2.48	2.57	2.69	2.82	2.94	3.02	3.12	3.19	0.88
68	Ball of Foot Circumference	8.37	8.57	8.86	9.10	9.48	9.87	10.24	10.58	10.78	11.02	11.18	2.81
69	Instep Circumference	8.97	9.16	9.43	9.65	10.02	10.43	10.88	11.31	11.56	11.85	12.03	3.06
70	Heel-Ankle Circumference	11.94	12.12	12.38	12.61	12.99	13.42	13.86	14.28	14.53	14.83	15.03	3.09
Age (years)		17.4	17.7	18.6	19.1	19.6	20.6	23.0	27.4	31.5	37.7	43.0	25.6

Mean Age - 22.17 years Number of men - 6682

TABLE 17. STATISTICAL VALUES FOR U. S. ARMY MEN (BASIC TRAINEES) - 1966

No.	Measurements	N	Mean	SE(M)	S.D.	Values in Inches			Stature ratio
						SE(SD)	V(%)	Range Min. Max.	
1	Weight (pounds)	2638	155.97	0.45	23.09	0.32	14.81	99.5 255.5	156.0
STANDING MEASUREMENTS									
2	Stature	2639	68.78	0.05	2.54	0.03	3.69	60.1 77.4	17.3
3	Cervicale Height	2639	58.84	0.05	2.43	0.03	4.13	50.3 67.6	17.3
4	Shoulder (Acromiale) Height	2639	56.56	0.05	2.39	0.03	4.22	48.9 64.3	15.4
5	Waist (Iliocristale) Height	2639	41.99	0.04	2.02	0.03	4.82	34.7 49.3	14.6
6	Crotch Height	2639	33.23	0.04	1.80	0.02	5.41	25.9 39.7	13.8
7	Kneecap (Patella) Height	2639	20.87	0.02	1.24	0.02	5.93	16.8 25.3	8.5
8	Calf Height	2639	13.96	0.02	1.00	0.01	7.14	9.4 17.6	8.2
9	Functional (Thumb-Tip) Reach	2638	32.38	0.04	1.83	0.03	5.66	25.7 39.5	13.8
SITTING MEASUREMENTS									
10	Vertical Reach, Sitting	2639	54.65	0.04	2.19	0.03	4.01	46.0 62.5	16.5
11	Sitting Height	2639	35.91	0.03	1.35	0.02	3.77	31.2 40.6	9.4
12	Eye Height, Sitting	2639	31.15	0.03	1.34	0.02	4.29	26.3 35.7	9.4
13	Mid-Shoulder Height, Sitting	2639	24.68	0.02	1.16	0.02	4.68	20.6 28.8	8.2
14	Shoulder-Elbow Length	2639	14.48	0.01	0.71	0.01	4.92	12.2 17.1	4.9
15	Elbow-Fingertip Length	2639	18.87	0.02	0.86	0.01	4.57	15.9 22.2	6.3
16	Knee Height, Sitting	2639	21.27	0.02	1.04	0.01	4.87	18.2 25.3	7.1
17	Popliteal Height, Sitting	2639	17.64	0.02	0.98	0.01	5.56	14.4 21.0	6.6
18	Buttock-Knee Length	2639	23.32	0.02	1.09	0.02	4.68	19.8 27.6	7.8
19	Buttock-Popliteal Length	2639	19.49	0.02	0.99	0.01	5.09	16.5 23.1	6.6
BREADTH MEASUREMENTS									
20	Chest Depth	2639	8.96	0.01	0.74	0.01	8.24	6.6 11.8	5.2
21	Chest Breadth	2639	11.99	0.02	0.83	0.01	6.95	9.6 15.4	5.8
22	Hip Breadth, Standing	2639	13.01	0.02	0.78	0.01	6.00	10.7 17.6	6.9
23	Shoulder (Bideloid) Breadth	2639	17.75	0.02	0.97	0.01	5.48	14.3 21.4	7.1
24	Forearm-Forearm Breadth	2639	17.78	0.03	1.61	0.02	9.03	13.1 25.3	12.2
25	Hip Breadth, Sitting	2639	13.36	0.02	0.93	0.01	6.95	10.9 18.8	7.9

TABLE 17. STATISTICAL VALUES FOR U. S. ARMY MEN (BASIC TRAINEES) - 1966 (continued)

No.	Measurements	N	Mean	SE(M)	S.D.	SE(SD)	V(%)	Values in Inches		Stature ratio
								Min.	Max.	
CIRCUMFERENCES										
26	Neck Circumference	2639	14.62	0.02	0.80	0.01	5.46	11.9	19.1	.212
27	Shoulder Circumference	2639	44.21	0.05	2.50	0.03	5.66	36.5	54.8	.643
28	Chest Circumference	2639	36.53	0.05	2.54	0.04	6.97	28.2	48.3	.531
29	Waist Circumference	2639	31.33	0.06	3.18	0.04	10.15	23.1	46.2	.456
30	Hip (Buttock) Circumference	2639	36.79	0.05	2.51	0.03	6.81	30.4	49.3	.535
31	Vert. Trunk Circum., Standing	2639	64.84	0.06	3.33	0.05	7.30	53.8	77.4	.943
LIMB CIRCUMFERENCES										
32	Scye Circumference	2639	17.48	0.02	1.22	0.02	7.00	13.5	22.9	.254
33	Biceps Circum., Relaxed	2639	11.42	0.02	1.09	0.01	9.53	8.2	15.2	.166
34	Biceps Circum., Flexed	2639	12.52	0.02	1.08	0.01	8.63	9.0	17.2	.182
35	Forearm Circum., Flexed	2639	11.51	0.02	0.80	0.01	6.99	8.9	14.7	.167
36	Wrist Circumference	2639	6.73	0.01	0.34	0.00	4.99	5.8	8.1	.098
37	Upper Thigh Circumference	2639	21.48	0.04	1.95	0.03	9.06	16.0	29.8	.312
38	Lower Thigh Circumference	2639	15.50	0.03	1.49	0.02	9.61	11.3	20.8	.225
39	Calf Circumference	2639	14.28	0.02	1.08	0.01	9.56	11.1	18.0	.208
40	Ankle Circumference	2639	8.94	0.01	0.56	0.01	6.29	7.1	11.0	.130
SURFACE MEASUREMENTS										
41	Shoulder Length	2639	6.21	0.01	0.73	0.01	11.83	3.8	9.0	.090
42	Interscye, Back	2639	15.33	0.02	1.23	0.02	8.00	10.9	20.0	.223
43	Interscye, Maximum	2639	20.63	0.03	1.36	0.02	6.61	16.0	25.9	.300
44	Waist Back Length	2639	17.59	0.02	1.28	0.02	7.30	13.3	22.7	.256
45	Sleeve Inseam Length	2639	19.14	0.02	1.01	0.01	5.30	15.8	23.5	.278
46	Sleeve Length	2639	33.76	0.03	1.48	0.02	4.38	28.4	39.5	.491

TABLE 17. STATISTICAL VALUES FOR U. S. ARMY MEN (BASIC TRAINEES) - 1966 (continued)

No.	Measurements	N	Values in Inches						Range		Stature ratio
			Mean	SE(M)	S.D.	SE(SD)	V(%)	Min.	Max.	Total	
HEAD AND FACE MEASUREMENTS											
47	Head Circumference	2639	22.01	0.01	0.61	0.01	2.79	20.06	24.30	4.24	.320
48	Head Length	2639	7.64	0.01	0.28	0.00	3.69	6.56	8.59	2.03	.111
49	Sellion to back of head	2639	7.50	0.01	0.28	0.00	3.73	6.56	8.44	1.88	.109
50	Pronasale to back of head	2639	8.73	0.01	0.33	0.00	3.74	7.42	10.01	2.59	.127
51	Ectocanthus to back of head	2639	6.70	0.01	0.35	0.00	5.26	5.45	7.96	2.51	.097
52	Tragion to back of head	2639	3.99	0.01	0.45	0.01	11.39	2.70	5.36	2.66	.058
53	Head Breadth	2639	6.01	0.00	0.22	0.00	3.70	5.22	6.86	1.64	.087
54	Bitragion Breadth	2639	5.30	0.00	0.22	0.00	4.10	4.63	6.11	1.48	.077
55	Head Height (Tragion-t. of h.)	2639	5.22	0.01	0.31	0.00	5.99	3.96	6.23	2.27	.076
56	Face Length (Menton-Sellion)	2639	4.72	0.01	0.26	0.00	5.49	3.80	5.76	1.96	.069
57	Face Breadth (Bizygomatic)	2638	5.49	0.00	0.21	0.00	3.90	4.78	6.19	1.41	.080
58	Interpupillary Breadth	2638	2.40	0.00	0.16	0.00	6.69	1.87	3.04	1.17	.035
HAND MEASUREMENTS											
59	Hand Length	2639	7.50	0.01	0.36	0.00	4.79	6.44	9.26	2.82	.109
60	Palm Length	2639	4.18	0.00	0.24	0.00	5.76	3.17	5.13	1.96	.061
61	Hand Breadth	2639	3.50	0.00	0.18	0.00	5.18	2.85	4.22	1.37	.051
62	Hand Circumference	2639	8.50	0.01	0.44	0.01	5.19	7.15	10.29	3.14	.124
63	Thumb Crotch Length	2639	1.95	0.00	0.19	0.00	10.00	1.32	2.73	1.41	.028
FOOT MEASUREMENTS											
64	Foot Length	2639	10.57	0.01	0.50	0.01	4.70	8.76	12.53	3.77	.154
65	Instep Length	2639	7.74	0.01	0.40	0.01	5.11	6.44	9.26	2.82	.112
66	Foot Breadth	2639	3.91	0.00	0.21	0.00	5.48	3.21	4.69	1.48	.057
67	Heel Breadth	2639	2.69	0.00	0.18	0.00	6.56	2.03	3.55	1.52	.039
68	Ball of Foot Circumference	2639	9.91	0.01	0.56	0.01	5.65	7.78	11.90	4.12	.144
69	Instep Circumference	2639	10.56	0.01	0.65	0.01	6.13	8.21	12.77	4.56	.154
70	Heel-Ankle Circumference	2639	13.42	0.01	0.64	0.01	4.78	11.32	15.92	4.60	.195
	Age (years)	2639	20.18	0.03	1.48	0.02	7.35	17.0	31.0	14.0	

TABLE 18. PERCENTILE VALUES FOR U. S. ARMY MEN (BASIC TRAINEES) - 1966

No.	Measurements	Percentiles in Inches										Range (1st-99th)	
		1st	2nd	5th	10th	25th	50th Median	75th	90th	95th	98th		99th
1	Weight (pounds)	111.9	117.0	123.7	129.4	139.4	153.0	169.8	187.6	199.0	212.0	220.4	108.5
STANDING MEASUREMENTS													
2	Stature	62.9	63.6	64.6	65.6	67.1	68.7	70.5	72.1	73.0	74.2	74.9	12.0
3	Cervicale Height	53.1	53.8	54.9	55.8	57.2	58.8	60.5	62.0	62.9	63.8	64.4	11.3
4	Shoulder (Acromiale) Height	51.1	51.7	52.6	53.5	54.9	56.5	58.2	59.6	60.5	61.6	62.3	11.2
5	Waist (Iliocristale) Height	37.4	37.9	38.6	39.4	40.6	42.0	43.3	44.6	45.4	46.3	46.9	9.5
6	Crotch Height	29.0	29.5	30.3	31.0	32.0	33.2	34.4	35.6	36.2	37.0	37.5	8.5
7	Kneecap (Patella) Height	18.1	18.4	18.8	19.3	20.0	20.8	21.7	22.5	22.9	23.5	23.8	5.7
8	Galf Height	11.8	12.0	12.4	12.7	13.3	13.9	14.6	15.3	15.7	16.1	16.4	4.6
9	Functional (Thumb-Tip) Reach	28.2	28.7	29.4	30.1	31.2	32.4	33.6	34.7	35.5	36.3	37.0	8.8
SITTING MEASUREMENTS													
10	Vertical Reach, Sitting	49.5	50.1	51.0	51.9	53.2	54.6	56.1	57.4	58.3	59.3	60.1	10.6
11	Sitting Height	32.6	33.0	33.6	34.2	35.0	35.9	36.8	37.6	38.2	38.7	39.1	6.5
12	Eye Height, Sitting	28.0	28.4	28.9	29.4	30.3	31.2	32.1	32.9	33.4	33.9	34.3	6.3
13	Mid-Shoulder Height, Sitting	22.0	22.3	22.8	23.2	23.9	24.7	25.4	26.2	26.6	27.1	27.4	5.4
14	Shoulder-Elbow Length	12.9	13.0	13.3	13.6	14.0	14.5	15.0	15.4	15.6	16.0	16.2	3.3
15	Elbow-Fingertip Length	16.9	17.1	17.5	17.8	18.3	18.9	19.4	20.0	20.3	20.7	21.0	4.1

TABLE 18. PERCENTILE VALUES FOR U. S. ARMY MEN (BASIC TRAINEES) - 1966 (continued)

No.	Measurements	Percentiles in Inches										Range (1st-99th)	
		Median											
		1st	2nd	5th	10th	25th	50th	75th	90th	95th	98th		99th
SITTING MEASUREMENTS (continued)													
16	Knee Height, Sitting	18.9	19.2	19.6	20.0	20.6	21.2	22.0	22.6	23.1	23.5	23.8	4.9
17	Popliteal Height, Sitting	15.4	15.7	16.0	16.4	16.9	17.6	18.3	18.9	19.3	19.7	19.9	4.5
18	Buttock-Knee Length	20.9	21.2	21.6	21.9	22.6	23.3	24.0	24.7	25.2	25.7	26.1	5.2
19	Buttock-Popliteal Length	17.2	17.5	17.9	18.2	18.8	19.5	20.2	20.8	21.2	21.6	21.9	4.7
BREADTH MEASUREMENTS													
20	Chest Depth	7.4	7.6	7.8	8.0	8.4	8.9	9.4	9.9	10.3	10.7	11.0	3.6
21	Chest Breadth	10.2	10.4	10.7	11.0	11.4	12.0	12.5	13.1	13.4	13.9	14.2	4.0
22	Hip Breadth, Standing	11.4	11.6	11.8	12.1	12.5	13.0	13.5	14.0	14.4	14.8	15.1	3.7
23	Shoulder (Bideltoïd) Breadth	15.6	15.8	16.2	16.5	17.1	17.7	18.4	19.0	19.4	19.9	20.2	4.6
24	Forearm-Forearm Breadth	14.7	15.0	15.4	15.8	16.6	17.6	18.8	20.0	20.7	21.5	22.0	7.3
25	Hip Breadth, Sitting	11.5	11.7	12.0	12.2	12.7	13.3	13.9	14.6	15.0	15.5	15.8	4.3
CIRCUMFERENCES													
26	Neck Circumference	12.8	13.1	13.4	13.6	14.1	14.6	15.1	15.7	16.0	16.4	16.6	3.8
27	Shoulder Circumference	38.9	39.5	40.4	41.1	42.5	44.1	45.8	47.5	48.6	49.8	50.7	11.8
28	Chest Circumference	31.5	32.0	32.8	33.5	34.7	36.3	38.1	39.9	41.1	42.6	43.6	12.1
29	Waist Circumference	25.8	26.5	27.3	27.9	29.0	30.7	33.1	35.8	37.6	39.6	40.8	15.0

TABLE 18. PERCENTILE VALUES FOR U. S. ARMY MEN (BASIC TRAINEES) - 1966 (continued)

No.	Measurements	Percentiles in Inches										Range 99th (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		
CIRCUMFERENCES (continued)													
30	Hip (Buttock) Circumference	31.9	32.4	33.2	33.8	35.0	36.5	38.3	40.2	41.4	42.8	43.7	11.8
31	Vert. Trunk Circum., Stand.	57.1	58.0	59.4	60.6	62.6	64.8	67.0	69.1	70.4	72.1	73.3	16.2
LIMB CIRCUMFERENCES													
32	Scye Circumference	15.0	15.2	15.6	16.0	16.6	17.4	18.2	19.1	19.6	20.3	20.8	5.8
33	Biceps Circum., Relaxed	9.2	9.5	9.8	10.1	10.6	11.3	12.1	12.9	13.4	13.9	14.2	5.0
34	Biceps Circum., Flexed	10.3	10.5	10.8	11.2	11.8	12.5	13.2	14.0	14.4	14.9	15.3	5.0
35	Forearm Circum., Flexed	9.8	9.9	10.2	10.5	10.9	11.5	12.0	12.6	12.9	13.2	13.5	3.7
36	Wrist Circumference	6.0	6.1	6.2	6.3	6.5	6.7	6.9	7.2	7.3	7.5	7.6	1.6
37	Upper Thigh Circumference	17.6	18.0	18.6	19.1	20.1	21.3	22.7	24.1	25.0	25.9	26.4	8.8
38	Lower Thigh Circumference	12.6	12.9	13.3	13.7	14.4	15.3	16.5	17.6	18.2	18.9	19.4	6.8
39	Calf Circumference	12.0	12.2	12.6	12.9	13.5	14.2	15.0	15.7	16.2	16.7	17.0	5.0
40	Ankle Circumference	7.8	7.9	8.1	8.2	8.6	8.9	9.3	9.7	9.9	10.2	10.4	2.6
SURFACE MEASUREMENTS													
41	Shoulder Length	4.4	4.6	4.9	5.2	5.8	6.3	6.7	7.1	7.3	7.7	8.0	3.6
42	Interscye, Back	12.6	12.8	13.3	13.7	14.5	15.3	16.2	16.9	17.3	17.8	18.2	5.6
43	Interscye, Maximum	17.5	17.9	18.4	18.9	19.7	20.6	21.5	22.4	23.0	23.6	24.0	6.5

TABLE 18. PERCENTILE VALUES FOR U. S. ARMY MEN (BASIC TRAINEES) - 1966 (continued)

No.	Measurements	Percentiles in Inches										Range 99th (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		
SURFACE MEASUREMENTS (continued)													
44	Waist Back Length	14.8	15.0	15.5	15.9	16.7	17.6	18.5	19.3	19.8	20.2	20.6	5.8
45	Sleeve Inseam Length	16.9	17.1	17.4	17.8	18.4	19.1	19.8	20.4	20.8	21.3	21.7	4.8
46	Sleeve Length	30.4	30.8	31.3	31.8	32.7	33.7	34.8	35.7	36.2	36.9	37.3	6.9
HEAD AND FACE MEASUREMENTS													
47	Head Circumference	20.54	20.73	21.00	21.23	21.60	22.00	22.41	22.79	23.03	23.31	23.51	2.97
48	Head Length	6.96	7.05	7.17	7.28	7.45	7.64	7.83	8.00	8.11	8.23	8.32	1.36
49	Sellion to back of head	6.84	6.91	7.03	7.14	7.31	7.51	7.69	7.86	7.96	8.09	8.18	1.34
50	Pronasale to back of head	7.95	8.04	8.18	8.30	8.51	8.73	8.95	9.14	9.25	9.39	9.49	1.54
51	Ectocanthus to back of head	5.91	6.01	6.15	6.27	6.46	6.69	6.93	7.17	7.31	7.47	7.57	1.66
52	Tragion to back of head	3.07	3.17	3.31	3.43	3.65	3.95	4.29	4.62	4.80	4.97	5.04	1.97
53	Head Breadth	5.51	5.57	5.65	5.73	5.86	6.01	6.16	6.29	6.38	6.49	6.56	1.05
54	Bitragion Breadth	4.79	4.85	4.94	5.02	5.15	5.30	5.44	5.58	5.66	5.76	5.82	1.03
55	Head Height (Trag.-t. of h.)	4.44	4.54	4.69	4.81	5.01	5.23	5.43	5.61	5.71	5.83	5.91	1.47
56	Face Length (Menton-Sellion)	4.12	4.20	4.31	4.40	4.54	4.71	4.88	5.06	5.16	5.28	5.35	1.23
57	Face Breadth (Bizygomatic)	5.00	5.06	5.14	5.22	5.34	5.48	5.63	5.77	5.85	5.95	6.02	1.02
58	Interpupillary Breadth	2.05	2.08	2.13	2.19	2.29	2.41	2.51	2.60	2.66	2.73	2.79	0.74

TABLE 18. PERCENTILE VALUES FOR U. S. ARMY MEN (BASIC TRAINEES) - 1966 (continued)

No.	Measurements	Percentiles in Inches										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		
HAND MEASUREMENTS													
59	Hand Length	6.71	6.79	6.92	7.04	7.25	7.49	7.74	7.97	8.11	8.27	8.38	1.67
60	Palm Length	3.63	3.70	3.79	3.88	4.02	4.18	4.34	4.50	4.59	4.70	4.78	1.15
61	Hand Breadth	3.10	3.14	3.21	3.27	3.37	3.49	3.61	3.73	3.81	3.89	3.95	0.85
62	Hand Circumference	7.57	7.67	7.82	7.96	8.20	8.48	8.79	9.09	9.27	9.47	9.60	2.03
63	Thumb Crotch Length	1.50	1.55	1.63	1.70	1.82	1.95	2.08	2.20	2.27	2.35	2.40	0.90
FOOT MEASUREMENTS													
64	Foot Length	9.43	9.57	9.77	9.94	10.24	10.56	10.89	11.20	11.41	11.66	11.84	2.41
65	Instep Length	6.81	6.92	7.09	7.24	7.48	7.74	7.99	8.24	8.40	8.59	8.73	1.92
66	Foot Breadth	3.44	3.49	3.57	3.64	3.76	3.90	4.04	4.19	4.27	4.38	4.45	1.01
67	Heel Breadth	2.32	2.36	2.42	2.48	2.57	2.68	2.81	2.93	3.00	3.09	3.15	0.83
68	Ball of Foot Circumference	8.51	8.71	8.98	9.20	9.55	9.92	10.29	10.63	10.83	11.05	11.19	2.68
69	Instep Circumference	9.11	9.26	9.50	9.72	10.11	10.55	11.00	11.40	11.64	11.91	12.09	2.98
70	Heel-Ankle Circumference	11.93	12.11	12.38	13.61	12.99	13.40	13.83	14.25	14.50	14.80	15.01	3.08
Age (years)													
		17.0	17.5	18.1	18.6	19.2	20.0	20.9	22.1	23.0	24.3	25.3	8.3

Mean Age - 20.18 years

Number of men - 2639

TABLE 19. STATISTICAL VALUES FOR U. S. ARMY MEN (BASIC TRAINEES) - 1977

No.	Measurements	N	Mean	SE(M)	Values in Inches				V(%)	Range		Stature ratio
					S.D.	SE(SD)	Min.	Max.		Min.	Total	
1	Weight (pounds)	287	156.02	1.43	24.22	1.01	102.5	233.8	15.52		131.3	
STANDING MEASUREMENTS												
2	Stature	287	68.53	0.16	2.68	0.11	60.2	77.7	3.91		17.5	1.000
3	Axilla Height	287	51.67	0.14	2.32	0.10	44.6	58.9	4.49		14.3	.754
4	Suprasternale Height	287	56.18	0.14	2.40	0.10	49.1	64.1	4.27		15.0	.820
5	Chest (Nipple) Height	287	50.17	0.13	2.23	0.09	43.4	57.7	4.44		14.3	.732
6	Substernale Height	287	48.25	0.13	2.16	0.09	40.9	55.2	4.48		14.3	.704
7	Elbow (Radiale) Height	287	43.07	0.12	1.99	0.08	37.2	49.8	4.62		12.6	.628
8	Knuckle Height (Metacarp. III)	287	29.73	0.10	1.62	0.07	24.6	35.2	5.45		10.6	.434
9	Waist Height (Natural)	287	40.99	0.13	2.26	0.09	35.7	46.9	5.51		11.2	.598
10	Waist Height (Omphalion)	287	41.52	0.12	2.07	0.09	35.2	47.2	4.99		12.0	.606
11	Buttock Height	287	35.20	0.12	2.00	0.08	29.7	41.5	5.68		11.8	.514
12	Gluteal Furrow Height	287	31.64	0.10	1.74	0.07	26.0	37.2	5.50		11.2	.462
13	Tibiale Height	283	19.02	0.06	1.09	0.04	15.9	22.0	5.73		6.1	.278
14	Acromion-Radiale Length	287	13.28	0.04	0.72	0.03	11.0	15.5	5.42		4.5	.194
15	Radiale-Stylelion Length	287	10.57	0.04	0.62	0.03	8.5	12.4	5.87		3.9	.154
SITTING MEASUREMENTS												
16	Sitting Height	287	35.17	0.08	1.43	0.06	30.7	39.4	4.07		8.7	.513
17	Eye Height, Sitting	287	30.48	0.08	1.34	0.06	26.3	34.1	4.40		7.8	.445
18	Mid-Shoulder Height, Sitting	287	24.17	0.07	1.19	0.05	20.8	27.2	4.92		6.4	.353
19	Shoulder-Elbow Length	287	14.30	0.04	0.73	0.03	12.3	16.5	5.10		4.2	.209
20	Elbow-Grip Length	287	13.77	0.05	0.77	0.03	11.1	16.1	5.59		5.0	.201
21	Elbow-Fingertip Length	287	18.81	0.06	0.97	0.04	15.7	21.5	5.16		5.8	.274
22	Knee Height, Sitting	287	21.69	0.07	1.19	0.05	18.3	24.9	5.49		6.6	.316
23	Popliteal Height, Sitting	287	17.43	0.06	1.07	0.04	14.6	20.5	6.14		5.9	.254
24	Buttock-Knee Length	287	23.93	0.07	1.21	0.05	20.6	27.7	5.06		7.1	.349

TABLE 19. STATISTICAL VALUES FOR U. S. ARMY MEN (BASIC TRAINEES) - 1977 (continued)

No.	Measurements	N	Mean	SE(M)	S.D.	Values in Inches					Stature ratio
						SE(SD)	V(%)	Min.	Range Max.	Total	
DEPTH AND BREADTH MEASUREMENTS											
25	Chest Depth	287	8.54	0.05	0.79	0.03	9.25	6.9	10.7	3.8	.125
26	Waist Depth	280	7.99	0.05	0.89	0.04	11.14	6.3	11.3	5.0	.117
27	Biacromial Breadth	287	15.53	0.05	0.78	0.03	5.02	13.2	17.7	4.5	.227
CIRCUMFERENCES											
28	Shoulder Circumference	287	43.67	0.14	2.42	0.10	5.54	37.5	51.2	13.7	.637
29	Chest Circumference	287	36.58	0.15	2.60	0.11	7.11	31.0	43.8	12.8	.534
30	Waist Circumference (Natural)	287	30.97	0.19	3.17	0.13	10.24	25.0	42.6	17.6	.452
31	Waist Circumference (Omphalion)	287	31.05	0.19	3.27	0.14	10.53	25.0	42.6	17.6	.453
32	Hip (Buttock) Circumference	287	37.46	0.14	2.38	0.10	6.35	33.0	44.8	11.8	.547
LIMB CIRCUMFERENCES											
33	Biceps Circum., Relaxed	287	11.48	0.06	1.09	0.05	9.49	8.7	15.0	6.3	.168
34	Biceps Circum., Flexed	287	12.35	0.06	1.07	0.04	8.66	9.4	15.4	6.0	.180
35	Calf Circumference	287	14.10	0.06	1.10	0.05	7.80	11.2	17.3	6.1	.206
36	Ankle Circumference	287	8.55	0.03	0.56	0.02	6.55	7.1	10.2	3.1	.125
SURFACE MEASUREMENTS											
37	Interscye, Back	287	16.15	0.07	1.11	0.05	6.87	13.1	18.9	5.8	.236
38	Interscye, Front	287	14.44	0.05	0.77	0.03	5.33	12.5	16.3	3.8	.211
39	Back Curvature - Chest Level	287	17.78	0.08	1.33	0.06	7.48	14.9	21.5	6.6	.259
40	Back Curvature - Waist Level	287	15.34	0.10	1.68	0.07	10.95	12.2	22.6	10.4	.224
41	Back Curvature - Hip Level	287	18.33	0.07	1.23	0.05	6.71	15.6	23.0	7.4	.267

TABLE 19. STATISTICAL VALUES FOR U. S. ARMY MEN (BASIC TRAINEES) - 1977 (continued)

No.	Measurements	N	Values in Inches						Range		Stature ratio
			Mean	SE(M)	S.D.	SE(SD)	V(%)	Min.	Max.	Total	
SURFACE MEASUREMENTS (continued)											
42	Waist Back Length	287	17.68	0.07	1.26	0.05	7.13	14.8	20.9	6.1	.258
43	Waist Front Length	287	16.16	0.07	1.19	0.05	7.36	12.8	19.3	6.5	.236
44	Sleeve Inseam Length	287	19.00	0.06	1.07	0.04	5.63	15.3	22.2	6.9	.277
45	Sleeve Outseam Length	287	23.14	0.07	1.27	0.05	5.49	18.6	26.3	7.7	.338
HEAD AND FACE MEASUREMENTS											
46	Head Circumference	287	22.05	0.04	0.64	0.03	2.90	20.31	23.74	3.43	.322
47	Sagittal Arc	102	13.70	0.06	0.59	0.04	4.31	11.81	15.28	3.47	.200
48	Bitrignon-Coronal Arc	102	13.43	0.05	0.50	0.04	3.72	12.20	14.65	2.45	.168
49	Bitrignon-Frontal Arc	102	11.54	0.04	0.42	0.03	3.64	10.43	12.48	2.05	.168
50	Bitrignon-Menton Arc	102	12.24	0.05	0.51	0.04	4.17	11.14	13.46	2.32	.179
51	Bitrignon-Submandibular Arc	102	11.27	0.05	0.51	0.04	4.53	10.20	12.52	2.32	.164
52	Head Length	287	7.66	0.02	0.28	0.01	3.66	6.61	8.43	1.82	.112
53	Glabella to back of head	102	7.72	0.03	0.28	0.02	3.63	7.05	8.54	1.49	.113
54	Sellion to back of head	102	7.67	0.03	0.28	0.02	3.65	6.97	8.50	1.53	.112
55	Pronasale to back of head	102	8.74	0.03	0.29	0.02	3.32	7.91	9.57	1.66	.128
56	Subnasale to back of head	102	8.22	0.03	0.31	0.02	3.77	7.56	9.17	1.61	.120
57	Lip Protrusion to back of head	102	8.23	0.04	0.39	0.03	4.74	7.40	9.41	2.01	.120
58	Menton to back of head	102	7.96	0.04	0.44	0.03	5.53	6.93	9.29	2.36	.116
59	Ectocanthus to back of head	102	6.89	0.03	0.29	0.02	4.21	6.22	7.68	1.46	.101
60	Trignon to back of head	102	4.06	0.03	0.28	0.02	6.90	3.23	4.72	1.49	.059

TABLE 19. STATISTICAL VALUES FOR U. S. ARMY MEN (BASIC TRAINEES) - 1977 (continued)

No.	Measurements	N	Mean	SE(M)	S.D.	SE(SD)	V(%)	Values in Inches			Stature ratio
								Min.	Max.	Total	
HEAD AND FACE MEASUREMENTS (continued)											
61	Head Breadth	287	5.93	0.01	0.21	0.01	3.54	5.39	6.57	1.18	.087
62	Bitracion Breadth	102	5.32	0.02	0.23	0.02	4.32	4.76	5.87	1.11	.078
63	Biauricular Breadth	102	7.04	0.03	0.34	0.02	4.83	6.18	7.91	1.73	.102
64	Head Height (Tragion-t. of h.)	102	5.27	0.03	0.27	0.02	5.12	4.53	6.06	1.53	.077
65	Ectocanthus to top of head	102	4.35	0.03	0.31	0.02	7.13	3.50	5.24	1.74	.063
66	Glabella to top of head	102	3.11	0.03	0.34	0.02	10.93	2.32	3.86	1.54	.045
67	Sellion to top of head	102	3.80	0.04	0.39	0.03	10.26	3.07	4.92	1.85	.055
68	Pronasale to top of head	102	5.17	0.04	0.42	0.03	8.12	4.29	6.42	2.13	.075
69	Subnasale to top of head	102	5.70	0.04	0.38	0.03	6.67	4.80	6.77	1.97	.083
70	Stomion to top of head	102	6.64	0.04	0.39	0.03	5.87	5.67	7.64	1.97	.097
71	Menton to top of head	102	8.40	0.04	0.39	0.03	4.64	7.48	9.45	1.97	.123
72	Face Length (Menton-Sellion)	102	4.61	0.03	0.27	0.02	5.86	4.02	5.20	1.18	.067
73	Menton-Crinion	102	7.29	0.03	0.33	0.02	4.53	6.50	8.15	1.65	.106
74	Minimum Frontal Breadth	102	4.38	0.03	0.32	0.02	7.31	3.62	5.00	1.38	.064
75	Face Breadth (Bizygomatic)	102	5.42	0.02	0.21	0.01	3.87	4.92	5.83	0.91	.079
76	Biocular Breadth	102	3.98	0.02	0.19	0.01	4.77	3.43	4.49	1.06	.058
77	Interpupillary Breadth	102	2.32	0.02	0.19	0.01	8.19	1.85	2.87	1.02	.034
78	Nose Length (Subnas.-Sellion)	102	1.96	0.01	0.14	0.01	7.14	1.65	2.28	0.63	.029
79	Nose Breadth	102	1.46	0.02	0.19	0.01	13.01	1.10	1.89	0.79	.021
80	Mouth Breadth, Smiling	102	2.55	0.03	0.28	0.02	10.98	2.01	3.19	1.18	.037
81	Ear Length	102	2.45	0.02	0.17	0.01	6.94	1.93	2.83	0.90	.036
82	Ear Breadth	102	1.71	0.01	0.14	0.01	8.19	1.34	2.09	0.75	.025

TABLE 19. STATISTICAL VALUES FOR U. S. ARMY MEN (BASIC TRAINEES) - 1977 (continued)

No.	Measurements	N	Mean	SE(M)	S.D.	Values in Inches			Stature ratio
						SE(SD)	V(%)	Range Min. Max.	
HAND MEASUREMENTS									
83	Hand Length	287	7.48	0.02	0.39	0.02	5.21	6.26 8.54	.109
84	Palm Length	287	4.23	0.01	0.23	0.01	5.44	3.54 4.76	.062
85	Hand Breadth	287	3.51	0.01	0.17	0.01	4.84	3.07 3.94	.051
86	Hand Circumference	287	8.31	0.02	0.39	0.02	4.69	7.13 9.45	.121
FOOT MEASUREMENTS									
87	Foot Length	286	10.53	0.03	0.52	0.02	4.94	8.86 11.65	.154
88	Instep Length	286	7.76	0.03	0.46	0.02	5.93	6.61 9.06	.113
89	Foot Breadth	286	3.90	0.01	0.22	0.01	5.64	3.19 4.53	.057
90	Ball of Foot Circumference	287	9.90	0.03	0.51	0.02	5.15	8.46 11.22	.144
91	Heel-Ankle Circumference	287	13.39	0.04	0.69	0.03	5.15	11.22 15.35	.195
92	Sphyrion Height	286	2.91	0.01	0.24	0.01	8.25	2.17 3.70	.042
	Age (years)	287	19.66	0.14	2.29	0.10	11.65	16.0 30.0	14.0

TABLE 20. PERCENTILE VALUES FOR U. S. ARMY MEN (BASIC TRAINEES) - 1977

No.	Measurements	Percentile in Inches										Range 99th (1st-99th)
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th	
1	Weight (pounds)			122.4	130.1	138.1	151.3	172.6	192.7	200.2		
STANDING MEASUREMENTS												
2	Stature			64.1	65.2	66.8	68.5	70.2	71.9	73.0		
3	Axilla Height			47.8	48.8	50.2	51.7	53.2	54.6	55.5		
4	Suprasternale Height			52.2	53.2	54.6	56.2	57.8	59.2	60.1		
5	Chest (Nipple) Height			46.4	47.3	48.7	50.2	51.7	53.0	53.7		
6	Substernale Height			44.7	45.5	46.9	48.3	49.7	51.0	51.8		
7	Elbow (Radiale) Height			39.8	40.6	41.8	43.1	44.4	45.6	46.4		
8	Knuckle Height (Metacarpale III)			27.1	27.7	28.7	29.7	30.8	31.8	32.4		
9	Waist Height (Natural)			37.2	38.0	39.4	41.0	42.6	43.9	44.7		
10	Waist Height (Omphalion)			38.0	38.9	40.2	41.5	42.9	44.2	45.0		
11	Buttock Height			31.8	32.6	33.9	35.3	36.5	37.7	38.4		
12	Gluteal Furrow Height			28.8	29.4	30.5	31.6	32.8	33.9	34.5		
13	Tibiale Height			17.1	17.6	18.3	19.0	19.7	20.4	20.8		
14	Acromion-Radiale Length			12.1	12.4	12.8	13.3	13.8	14.2	14.5		
15	Radiale-Styilion Length			9.6	9.8	10.2	10.5	11.0	11.4	11.7		

TABLE 20. PERCENTILE VALUES FOR U. S. ARMY MEN (BASIC TRAINEES) - 1977 (continued)

No.	Measurements	Percentiles in Inches									Range 99th (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th		98th
SITTING MEASUREMENTS												
16	Sitting Height			32.9	33.4	34.3	35.2	36.1	37.0	37.6		
17	Eye Height, Sitting			28.3	28.9	29.6	30.4	31.3	32.2	32.8		
18	Mid-Shoulder Height, Sitting			22.3	22.7	23.4	24.1	25.0	25.7	26.2		
19	Shoulder-Elbow Length			13.1	13.4	13.8	14.3	14.8	15.2	15.5		
20	Elbow-Grip Length			12.5	12.8	13.3	13.8	14.3	14.8	15.1		
21	Elbow-Fingertip Length			17.3	17.7	18.2	18.8	19.4	20.1	20.5		
22	Knee Height, Sitting			19.8	20.2	20.9	21.7	22.5	23.2	23.7		
23	Popliteal Height, Sitting			15.6	16.1	16.7	17.4	18.1	18.8	19.2		
24	Buttock-Knee Length			21.9	22.4	23.1	23.9	24.8	25.5	25.9		
DEPTH AND BREADTH MEASUREMENTS												
25	Chest Depth			7.5	7.6	7.9	8.4	9.0	9.7	10.1		
26	Waist Depth			6.9	7.0	7.3	7.8	8.5	9.3	9.8		
27	Biacromial Breadth			14.2	14.5	15.0	15.6	16.1	16.5	16.8		

TABLE 20. PERCENTILE VALUES FOR U. S. ARMY MEN (BASIC TRAINEES) - 1977 (continued)

No.	Measurements	Percentiles in Inches										Range 99th (1st-99th)
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th	
CIRCUMFERENCES												
28	Shoulder Circumference			39.9	40.6	41.9	43.5	45.3	46.9	47.8		
29	Chest Circumference			33.0	33.6	34.6	36.2	38.2	40.3	41.6		
30	Waist Circumference (Natural)			27.1	27.6	28.7	30.3	32.6	35.3	37.2		
31	Waist Circumference (Omphalion)			26.9	27.7	28.9	30.1	32.7	36.0	37.8		
32	Hip (Buttock) Circumference			34.4	34.8	35.6	37.0	38.9	40.9	42.1		
LIMB CIRCUMFERENCES												
33	Biceps Circum., Relaxed			9.8	10.1	10.7	11.4	12.2	12.9	13.4		
34	Biceps Circum., Flexed			10.6	11.0	11.6	12.3	13.1	13.8	14.2		
35	Calf Circumference			12.4	12.8	13.3	14.0	14.8	15.6	16.1		
36	Ankle Circumference			7.6	7.8	8.2	8.6	8.9	9.2	9.5		
SURFACE MEASUREMENTS												
37	Intercye, Back			14.4	14.7	15.4	16.1	16.9	17.6	18.1		
38	Interscye, Front			13.2	13.4	13.9	14.4	15.0	15.5	15.8		

TABLE 20. PERCENTILE VALUES FOR U. S. ARMY MEN (BASIC TRAINEES) - 1977 (continued)

No.	Measurements	Percentiles in Inches									Range 99th (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th		98th
SURFACE MEASUREMENTS (continued)												
39	Back Curvature - Chest Level			16.0	16.2	16.8	17.6	18.6	19.7	20.3		
40	Back Curvature - Waist Level			13.2	13.6	14.2	15.0	16.2	17.5	18.5		
41	Back Curvature - Hip Level			16.7	16.9	17.4	18.1	19.1	20.1	20.7		
42	Waist Back Length			15.6	16.0	16.8	17.7	18.6	19.4	19.8		
43	Waist Front Length			14.2	14.6	15.3	16.1	17.0	17.7	18.2		
44	Sleeve Inseam Length			17.3	17.7	18.3	19.0	19.7	20.4	20.8		
45	Sleeve Outseam Length			21.2	21.6	22.3	23.1	24.0	24.9	25.4		
HEAD AND FACE MEASUREMENTS												
46	Head Circumference			20.94	21.22	21.65	22.09	22.48	22.83	23.07		
47	Sagittal Arc			12.87	13.07	13.35	13.66	14.06	14.49	14.76		
48	Bitracion-Coronal Arc			12.56	12.76	13.07	13.46	13.82	14.06	14.21		
49	Bitracion-Frontal Arc			10.87	11.02	11.26	11.54	11.85	12.09	12.24		
50	Bitracion-Menton Arc			11.42	11.57	11.85	12.24	12.68	12.87	13.03		
51	Bitracion-Submadibular Arc			10.51	10.59	10.83	11.30	11.65	11.97	12.09		

TABLE 20. PERCENTILE VALUES FOR U. S. ARMY MEN (BASIC TRAINEES) - 1977 (continued)

No.	Measurements	Percentiles in Inches										Range 99th (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		
HEAD AND FACE MEASUREMENTS (continued)													
52	Head Length			7.20	7.32	7.48	7.68	7.83	7.99	8.11			
53	Glabella to back of head			7.28	7.40	7.52	7.72	7.87	8.07	8.19			
54	Sellion to back of head			7.24	7.32	7.52	7.68	7.83	7.99	8.15			
55	Pronasale to back of head			8.27	8.35	8.54	8.74	8.94	9.13	9.21			
56	Subnasale to back of head			7.72	7.83	7.99	8.23	8.39	8.58	8.74			
57	Lip Protrusion to back of head			7.64	7.76	7.95	8.19	8.46	8.78	8.98			
58	Menton to back of head			7.32	7.44	7.64	7.91	8.23	8.54	8.74			
59	Ectocanthus to back of head			6.42	6.50	6.69	6.89	7.09	7.24	7.36			
60	Tragion to back of head			3.62	3.70	3.90	4.06	4.25	4.45	4.53			
61	Head Breadth			5.59	5.67	5.79	5.94	6.06	6.18	6.30			
62	Bitragion Breadth			4.92	5.00	5.16	5.31	5.47	5.63	5.71			
63	Biauricular Breadth			6.50	6.61	6.81	7.01	7.24	7.48	7.64			
64	Head Height (Tragion-top of head)			4.84	4.92	5.12	5.28	5.43	5.59	5.67			
65	Ectocanthus to top of head			3.86	3.98	4.13	4.33	4.57	4.76	4.88			
66	Glabella to top of head			2.56	2.68	2.87	3.11	3.39	3.54	3.70			

TABLE 20. PERCENTILE VALUES FOR U. S. ARMY MEN (BASIC TRAINEES) - 1977 (continued)

No.	Measurements	Percentiles in Inches										Range 99th (1st-99th)
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th	
HEAD AND FACE MEASUREMENTS (continued)												
67	Sellion to top of head			3.23	3.27	3.46	3.82	4.06	4.33	4.45		
68	Pronasale to top of head			4.57	4.65	4.84	5.12	5.47	5.75	5.94		
69	Subnasale to top of head			5.12	5.24	5.43	5.67	5.98	6.22	6.38		
70	Stomion to top of head			6.06	6.18	6.34	6.61	6.89	7.20	7.36		
71	Menton to top of head			7.83	7.95	8.11	8.35	8.66	8.94	9.13		
72	Face Length (Menton-Sellion)			4.17	4.25	4.41	4.61	4.80	4.96	5.04		
73	Menton-Grinion			6.73	6.85	7.09	7.32	7.52	7.72	7.83		
74	Minimum Frontal Breadth			3.90	3.98	4.13	4.41	4.65	4.80	4.88		
75	Face Breadth (Bizygomatic)			5.04	5.12	5.28	5.43	5.59	5.67	5.71		
76	Biocular Breadth			3.66	3.74	3.86	3.98	4.13	4.21	4.29		
77	Interpupillary Breadth			2.01	2.09	2.20	2.32	2.44	2.56	2.64		
78	Nose Length (Subnasale-Sellion)			1.73	1.77	1.85	1.93	2.05	2.17	2.20		
79	Nose Breadth			1.18	1.22	1.34	1.46	1.61	1.73	1.81		
80	Mouth Breadth, Smiling			2.13	2.17	2.32	2.52	2.76	2.95	3.03		
81	Ear Length			2.17	2.24	2.36	2.44	2.56	2.68	2.72		
82	Ear Breadth			1.50	1.54	1.61	1.69	1.81	1.89	1.97		

TABLE 20. PERCENTILE VALUES FOR U. S. ARMY MEN (BASIC TRAINEES) - 1977 (continued)

No.	Measurements	Percentiles in Inches									Range 99th (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th		98th
HAND MEASUREMENTS												
83	Hand Length			6.85	7.01	7.20	7.48	7.76	7.99	8.11		
84	Palm Length			3.86	3.94	4.09	4.25	4.41	4.53	4.61		
85	Hand Breadth			3.27	3.31	3.39	3.50	3.62	3.74	3.82		
86	Hand Circumference			7.68	7.83	8.07	8.31	8.58	8.82	8.98		
FOOT MEASUREMENTS												
87	Foot Length			9.65	9.84	10.20	10.55	10.91	11.22	11.38		
88	Instep Length			6.97	7.17	7.44	7.76	8.07	8.35	8.54		
89	Foot Breadth			3.54	3.62	3.78	3.90	4.06	4.21	4.29		
90	Ball of Foot Circumference			9.13	9.29	9.57	9.88	10.24	10.59	10.79		
91	Heel-Ankle Circumference			12.32	12.56	12.95	13.35	13.86	14.33	14.57		
92	Sphyrion Height			2.52	2.60	2.76	2.91	3.07	3.23	3.31		
Age (years)												
				17.2	17.4	18.0	19.0	20.7	23.2	24.0		
Mean Age - 19.66 years												Number of men - 287

TABLE 21. STATISTICAL VALUES FOR U. S. ARMY WOMEN - 1946

No.	Measurements	N	Mean	SE(M)	S.D.	SE(SD)	V(%)	Values in Inches		Stature ratio
								Min.	Range Max.	Total
1	Weight (pounds)	8107	131.47	0.22	19.85	0.16	15.10	86.0	246.0	160.0
STANDING MEASUREMENTS										
2	Stature	8121	63.84	0.03	2.36	0.02	3.71	55.5	72.4	16.9
3	Cervicale Height	8121	54.43	0.02	2.22	0.02	4.09	47.6	62.6	15.0
4	Shoulder (Acromiale) Height	8118	52.79	0.02	2.17	0.02	4.12	45.3	61.8	16.5
5	Waist Height	8121	40.34	0.02	1.80	0.01	4.48	34.3	48.0	13.7
6	Crotch Height	8113	28.67	0.02	1.59	0.01	5.57	22.8	35.0	12.2
7	Hip (Trochanteric) Height	8120	32.17	0.02	1.69	0.01	5.28	26.4	39.4	12.0
8	Shoulder-Fingertip Length	8118	25.17	0.02	1.37	0.01	5.50	20.1	30.3	10.2
SITTING MEASUREMENTS										
9	Sitting Height	8119	32.94	0.01	1.26	0.01	3.83	28.0	38.2	10.2
10	Trunk Height, Sitting	8119	21.11	0.01	1.07	0.01	5.11	16.9	24.8	7.9
11	Shoulder-Elbow Length	8119	13.07	0.01	0.72	0.01	5.62	9.8	16.1	6.3
12	Elbow-Fingertip Length	8118	16.68	0.01	0.82	0.01	4.97	13.0	20.5	7.5
13	Knee Height, Sitting	8117	18.77	0.01	0.94	0.01	5.07	15.0	22.4	7.4
14	Buttock-Knee Length	8117	22.36	0.01	1.16	0.01	5.23	17.7	26.4	8.7
DEPTH AND BREADTH MEASUREMENTS										
15	Chest Depth (above Bust)	8118	7.12	0.01	0.63	0.00	9.10	5.1	11.4	6.3
16	Trunk Depth	8114	7.57	0.01	0.94	0.01	12.69	4.7	13.4	8.7
17	Chest Breadth	8118	11.19	0.01	0.94	0.01	8.52	7.9	16.5	8.6
18	Bi-iliac Breadth	8120	9.69	0.01	0.91	0.01	9.60	6.3	13.8	7.5
19	Shoulder (Bideltoid) Breadth	8120	15.58	0.01	1.01	0.01	6.54	12.2	22.0	9.8
20	Bustpoint-Bustpoint Breadth	8116	7.59	0.01	0.85	0.01	11.44	4.3	13.4	9.1
21	Elbow-Elbow Breadth	8116	15.04	0.02	1.44	0.01	9.72	10.6	25.2	14.6
22	Hip Breadth, Sitting	8120	14.54	0.01	1.11	0.01	7.76	10.6	19.7	9.1

TABLE 21. STATISTICAL VALUES FOR U. S. ARMY WOMEN - 1946 (continued)

No.	Measurements	N	Values in Inches					Range		Stature ratio
			Mean	SE(M)	S.D.	SE(SD)	V(%)	Min.	Max.	
CIRCUMFERENCES										
23	Neck Circumference	8112	12.50	0.01	0.66	0.01	5.33	9.4	15.7	6.3
24	Bust Circumference	8115	35.00	0.03	3.02	0.02	8.68	26.8	50.4	23.6
25	Chest Circum. below Bust	8115	30.44	0.03	2.41	0.02	7.98	23.6	46.1	22.5
26	Waist Circumference	8115	26.38	0.03	2.46	0.02	9.38	20.5	43.3	22.8
27	Halfway to Hip Circumference	8109	33.80	0.03	2.96	0.02	8.80	25.6	49.2	23.6
28	Hip Circum. at Trochanterion	8113	37.44	0.03	2.64	0.02	7.08	29.1	49.6	20.5
29	Vert. Trunk Circum., Standing	7771	58.94	0.03	2.82	0.02	4.80	49.2	72.8	23.6
LIMB CIRCUMFERENCES										
30	Scye Circumference	8119	14.93	0.01	1.24	0.01	8.38	9.1	20.1	11.0
31	Biceps Circum., Relaxed	8116	10.09	0.01	1.07	0.01	10.83	7.1	15.7	8.6
32	Forearm Circum., Relaxed	8110	8.87	0.01	0.65	0.01	7.38	6.8	11.8	5.0
33	Wrist Circumference	8112	5.79	0.00	0.32	0.00	5.53	4.5	7.2	2.7
34	Upper Thigh Circumference	7781	22.08	0.02	2.06	0.02	9.40	15.4	31.1	15.7
35	Mid-Thigh Circumference	8112	19.30	0.02	1.93	0.02	10.11	13.0	29.1	16.1
SURFACE MEASUREMENTS										
36	Shoulder Length	8118	4.78	0.01	0.46	0.00	9.60	3.3	6.6	3.3
37	Cervicale to Lat. Neck Point	8116	3.59	0.00	0.37	0.00	10.27	2.3	5.1	2.8
38	Interscye, Back	8120	13.54	0.01	1.08	0.01	8.11	9.1	17.7	8.6
39	Waist Back Length	8115	14.88	0.01	0.90	0.01	6.10	11.4	18.5	7.1
40	Waist Front Length	8106	12.87	0.01	0.79	0.01	6.13	10.2	15.7	5.5
41	Strap Length	8117	28.15	0.03	2.54	0.02	9.08	19.7	39.4	19.7
42	Lateral Neck Point to Waist	8111	16.72	0.01	0.99	0.01	5.98	11.8	20.5	8.7
43	Axilla to Waist Length	8113	9.11	0.01	1.05	0.01	11.73	3.9	13.8	9.9
44	Crotch Length	7778	27.58	0.03	2.27	0.02	8.29	18.1	39.0	20.9

TABLE 21. STATISTICAL VALUES FOR U. S. ARMY WOMEN - 1946 (continued)

No.	Measurements	N	Mean	SE(M)	S.D.	SE(ED)	V(%)	Values in Inches			Stature ratio
								Min.	Max.	Total	
HEAD AND FACE MEASUREMENTS											
45	Head Circumference	8112	21.71	0.01	0.61	0.00	2.82	19.68	24.02	4.34	.340
46	Head Length	8118	7.23	0.00	0.26	0.00	3.54	6.22	8.07	1.85	.113
47	Ectocanthus-Otobasion Sup.	8114	3.03	0.00	0.20	0.00	6.50	2.20	3.82	1.62	.047
48	Head Breadth	8118	5.73	0.00	0.22	0.00	3.76	4.88	6.57	1.69	.090
49	Head Height (Tragion-t. of h.)	8114	5.18	0.00	0.35	0.00	6.82	3.94	6.46	2.52	.081
50	Face Length (Menton-Sellion)	8120	4.39	0.00	0.28	0.00	6.42	3.50	5.91	2.41	.069
51	Minimum Frontal Breadth	8118	3.96	0.00	0.23	0.00	5.89	2.95	4.76	1.81	.062
52	Face Breadth (Bizygomatic)	8117	5.15	0.00	0.21	0.00	4.15	4.33	5.98	1.65	.081
53	Biocular Breadth	8116	3.55	0.00	0.18	0.00	5.05	2.91	4.33	1.42	.056
54	Interocular Breadth	8116	1.24	0.00	0.12	0.00	9.65	0.79	1.73	0.94	.019
55	Nose Length (Subnas.-Sell.)	8115	1.89	0.00	0.22	0.00	11.62	0.98	3.43	2.45	.030
56	Nasal Root Breadth	8114	0.61	0.00	0.10	0.00	15.72	0.39	1.02	0.63	.010
57	Nose Breadth	8119	1.23	0.00	0.11	0.00	9.26	0.79	1.73	0.94	.019
HAND MEASUREMENTS											
58	Hand Length	8113	6.88	0.00	0.32	0.00	4.70	5.79	8.19	2.40	.108
59	Hand Breadth	8113	3.03	0.00	0.20	0.00	6.57	2.48	3.90	1.42	.047
FOOT MEASUREMENTS											
60	Foot Length	3321	9.42	0.01	0.44	0.01	4.62	7.87	10.98	3.11	.148
61	Instep Length	1883	6.98	0.01	0.35	0.01	5.08	5.83	8.15	2.32	.109
62	Foot Breadth	3324	3.56	0.00	0.22	0.00	6.27	2.87	4.41	1.54	.056
63	Heel Breadth	3319	2.34	0.00	0.17	0.00	7.39	1.77	3.11	1.34	.037
64	Ball of Foot Circumference	8108	8.62	0.01	0.45	0.00	5.24	7.28	10.35	3.07	.135
	Age (years)	8118	27.30	0.06	5.57	0.04	20.40	16.0	52.0	36.0	

TABLE 22. PERCENTILE VALUES FOR U. S. ARMY WOMEN - 1946

No.	Measurements	Percentiles in Inches										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		
1	Weight (pounds)	97.0	99.9	104.4	108.8	117.2	128.6	142.7	158.1	168.6	181.6	191.0	94.0
STANDING MEASUREMENTS													
2	Stature	58.5	59.1	60.0	60.8	62.2	63.8	65.4	66.9	67.8	68.8	69.5	11.0
3	Cervicale Height	49.4	50.0	50.8	51.6	52.9	54.4	55.9	57.3	58.2	59.1	59.8	10.4
4	Shoulder (Acromiale) Height	47.9	48.5	49.3	50.0	51.3	52.7	54.2	55.6	56.4	57.4	58.1	10.2
5	Waist Height	36.3	36.7	37.4	38.1	39.1	40.3	41.5	42.6	43.4	44.2	44.8	8.5
6	Crotch Height	24.9	25.4	26.1	26.7	27.6	28.6	29.7	30.7	31.3	32.0	32.6	7.7
7	Hip (Trochanteric) Height	28.4	28.8	29.5	30.0	31.0	32.1	33.3	34.3	35.0	35.8	36.4	8.0
8	Shoulder-Fingertip Length	22.0	22.4	22.9	23.4	24.2	25.2	26.1	26.9	27.4	28.1	28.5	6.5
SITTING MEASUREMENTS													
9	Sitting Height	30.0	30.4	30.9	31.3	32.1	32.9	33.8	34.6	35.0	35.5	35.9	5.9
10	Trunk Height, Sitting	18.7	19.0	19.4	19.7	20.4	21.1	21.8	22.5	22.9	23.3	23.6	4.9
11	Shoulder-Elbow Length	11.3	11.6	11.9	12.2	12.6	13.1	13.5	14.0	14.3	14.6	14.8	3.5
12	Elbow-Fingertip Length	14.7	14.9	15.3	15.6	16.2	16.7	17.2	17.7	18.0	18.4	18.7	4.0
13	Knee Height, Sitting	16.6	16.8	17.2	17.6	18.1	18.8	19.4	20.0	20.3	20.8	21.1	4.5
14	Buttock-Knee Length	19.7	20.0	20.5	20.9	21.6	22.4	23.1	23.8	24.3	24.9	25.3	5.6

TABLE 22. PERCENTILE VALUES FOR U. S. ARMY WOMEN - 1946 (continued)

No.	Measurements	Percentiles in Inches										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		
DEPTH AND BREADTH MEASUREMENTS													
15	Chest Depth (above Bust)	5.8	5.9	6.1	6.3	6.7	7.1	7.5	7.9	8.2	8.6	8.8	3.0
16	Trunk Depth	5.9	6.1	6.3	6.5	6.9	7.4	8.1	8.8	9.4	10.0	10.5	4.6
17	Chest Breadth	9.3	9.5	9.8	10.1	10.6	11.1	11.8	12.4	12.8	13.4	13.9	4.6
18	Bi-iliac Breadth	7.6	7.8	8.2	8.6	9.1	9.7	10.3	10.8	11.2	11.7	12.0	4.4
19	Shoulder (Bidel.) Breadth	13.5	13.7	14.1	14.4	14.9	15.5	16.2	16.9	17.4	18.0	18.4	4.9
20	Bustpoint-Bustpoint Breadth	5.7	5.9	6.3	6.6	7.0	7.5	8.1	8.7	9.0	9.5	9.8	4.1
21	Elbow-Elbow Breadth	12.3	12.6	13.0	13.4	14.0	14.9	15.9	17.0	17.7	18.6	19.2	6.9
22	Hip Breadth, Sitting	12.3	12.5	12.9	13.2	13.8	14.4	15.2	16.0	16.5	17.2	17.7	5.4
CIRCUMFERENCES													
23	Neck Circumference	11.1	11.3	11.5	11.7	12.0	12.5	12.9	13.4	13.7	14.0	14.3	3.2
24	Bust Circumference	29.4	30.0	30.8	31.5	32.8	34.6	36.8	39.1	40.6	42.4	43.7	14.3
25	Chest Circum. below Bust	25.9	26.4	27.0	27.6	28.7	30.1	31.8	33.7	34.9	36.5	37.7	11.8
26	Waist Circumference	22.1	22.5	23.1	23.7	24.6	26.0	27.7	29.7	31.1	32.8	34.1	12.0
27	Halfway to Hip Circumference	28.1	28.6	29.5	30.3	31.7	33.5	35.5	37.7	39.1	41.0	42.3	14.2
28	Hip Circum. at Trochanterion	32.4	32.9	33.6	34.3	35.6	37.2	39.0	40.9	42.2	43.9	45.2	12.8
29	Vert. Trunk Circum., Stand.	52.9	53.6	54.6	55.5	57.0	58.8	60.7	62.6	63.9	65.4	66.5	13.6

TABLE 22. PERCENTILE VALUES FOR U. S. ARMY WOMEN - 1946 (continued)

No.	Measurements	Percentiles in Inches										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		99th
LIMB CIRCUMFERENCES													
30	Sbye Circumference	12.3	12.6	13.0	13.4	14.1	14.8	15.7	16.5	17.1	17.8	18.3	6.0
31	Biceps Circum., Relaxed	8.0	8.2	8.5	8.8	9.3	10.0	10.7	11.6	12.1	12.7	13.1	5.1
32	Forearm Circum., Relaxed	7.5	7.6	7.9	8.1	8.4	8.8	9.3	9.7	10.0	10.4	10.7	3.2
33	Wrist Circumference	5.1	5.2	5.3	5.4	5.6	5.8	6.0	6.2	6.4	6.5	6.7	1.6
34	Upper Thigh Circumference	17.9	18.4	19.0	19.6	20.6	21.9	23.3	24.8	25.8	26.9	27.6	9.7
35	Mid-Thigh Circumference	15.4	15.8	16.4	17.0	18.0	19.2	20.5	21.8	22.7	23.7	24.4	9.0
SURFACE MEASUREMENTS													
36	Shoulder Length	3.8	3.9	4.0	4.2	4.5	4.8	5.1	5.4	5.5	5.8	6.0	2.2
37	Cervicale to Lat. Neck Pt.	2.7	2.8	3.0	3.1	3.4	3.6	3.8	4.0	4.2	4.4	4.5	1.8
38	Interscye, Back	11.2	11.4	11.8	12.2	12.8	13.5	14.2	15.0	15.4	15.9	16.3	5.1
39	Waist Back Length	12.8	13.0	13.4	13.7	14.3	14.9	15.5	16.0	16.4	16.7	17.0	4.2
40	Waist Front Length	11.1	11.3	11.6	11.9	12.4	12.8	13.4	13.9	14.2	14.6	14.9	3.8
41	Strap Length	23.6	24.1	24.8	25.3	26.3	27.8	29.6	31.6	32.9	34.6	35.7	12.1
42	Lat. Neck Point to Waist	14.5	14.8	15.2	15.5	16.1	16.7	17.4	18.0	18.4	18.9	19.2	4.7
43	Axilla to Waist Length	6.8	7.1	7.5	7.9	8.4	9.1	9.8	10.4	10.9	11.4	11.8	5.0
44	Crotch Length	22.6	23.3	24.2	24.9	26.1	27.4	28.9	30.5	31.6	33.0	34.0	11.4

TABLE 22. PERCENTILE VALUES FOR U. S. ARMY WOMEN - 1946 (continued)

No.	Measurements	Percentiles in Inches										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		
HEAD AND FACE MEASUREMENTS													
45	Head Circumference	20.28	20.46	20.72	20.94	21.30	21.70	22.12	22.50	22.74	23.02	23.21	2.93
46	Head Length	6.64	6.70	6.80	6.89	7.06	7.23	7.41	7.56	7.65	7.75	7.82	1.18
47	Ectocanthus-Otobasion Sup.	2.53	2.62	2.72	2.79	2.90	3.02	3.15	3.28	3.36	3.46	3.52	1.00
48	Head Breadth	5.19	5.27	5.38	5.46	5.60	5.74	5.87	6.00	6.08	6.18	6.25	1.06
49	Head Height (Trag.-t. of h.)	4.34	4.43	4.58	4.72	4.94	5.19	5.41	5.62	5.75	5.92	6.04	1.70
50	Face Length (Menton-Sellion)	3.82	3.86	3.95	4.05	4.21	4.38	4.54	4.71	4.86	5.09	5.28	1.46
51	Minimum Frontal Breadth	3.32	3.42	3.56	3.66	3.82	3.97	4.11	4.24	4.31	4.40	4.46	1.14
52	Face Breadth (Bizygomatic)	4.62	4.69	4.79	4.87	5.01	5.15	5.29	5.41	5.48	5.57	5.64	1.02
53	Biocular Breadth	3.16	3.20	3.27	3.33	3.43	3.55	3.67	3.79	3.86	3.94	3.99	0.83
54	Interocular Breadth	0.96	1.00	1.05	1.10	1.17	1.24	1.32	1.40	1.45	1.50	1.55	0.59
55	Nose Length (Subnas.-Sell.)	1.45	1.50	1.58	1.66	1.78	1.88	1.98	2.12	2.26	2.52	2.76	1.31
56	Nasal Root Breadth	0.41	0.43	0.47	0.49	0.55	0.61	0.68	0.74	0.78	0.83	0.87	0.46
57	Nose Breadth	0.97	1.00	1.05	1.10	1.16	1.23	1.29	1.37	1.42	1.50	1.57	0.60

TABLE 22. PERCENTILE VALUES FOR U. S. ARMY WOMEN - 1946 (continued)

No.	Measurements	Percentiles in Inches										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		99th
HAND MEASUREMENTS													
58	Hand Length	6.11	6.21	6.35	6.47	6.66	6.87	7.10	7.31	7.45	7.61	7.72	1.61
59	Hand Breadth	2.63	2.68	2.75	2.80	2.89	3.00	3.14	3.30	3.40	3.53	3.62	0.99
FOOT MEASUREMENTS													
60	Foot Length	8.46	8.58	8.75	8.89	9.12	9.40	9.70	9.99	10.17	10.38	10.52	2.06
61	Instep Length	6.14	6.25	6.41	6.54	6.75	6.97	7.21	7.44	7.67	7.74	7.84	1.70
62	Foot Breadth	3.07	3.12	3.21	3.28	3.41	3.56	3.71	3.85	3.94	4.04	4.11	1.04
63	Heel Breadth	1.98	2.02	2.08	2.13	2.22	2.33	2.45	2.57	2.65	2.74	2.81	0.83
64	Ball of Foot Circumference	7.63	7.74	7.91	8.05	8.30	8.60	8.91	9.21	9.39	9.61	9.75	2.12
Age (years)													
		21.1	22.0	22.7	23.0	23.7	25.9	30.2	35.8	39.7	44.3	47.2	26.1

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Mean Age - 27.30 years Number of women - 8100

TABLE 23. STATISTICAL VALUES FOR U. S. ARMY WOMEN - 1977

No.	Measurements	N	Mean	SE(M)	S.D.	SE(SD)	V(%)	Values in Inches			Stature ratio
								Min.	Max.	Total	
1	Weight (pounds)	1331	132.22	0.53	19.16	0.37	14.49	88.0	275.8	187.8	
STANDING MEASUREMENTS											
2	Stature	1331	64.16	0.07	2.57	0.05	4.01	56.1	72.4	16.3	1.000
3	Cervicale Height	255	55.23	0.15	2.37	0.10	4.29	49.7	63.7	14.0	.861
4	Shoulder (Acromiale) Height	1331	52.56	0.06	2.36	0.05	4.49	45.6	61.1	15.5	.819
5	Axilla Height	1331	48.52	0.06	2.20	0.04	4.53	41.1	55.9	14.8	.756
6	Suprasternale Height	255	52.21	0.14	2.22	0.10	4.25	47.0	59.9	12.9	.814
7	Bustpoint Height	1331	46.57	0.06	2.22	0.04	4.77	38.9	53.5	14.6	.726
8	Substernale Height	255	44.85	0.12	1.96	0.09	4.37	40.0	51.4	11.4	.699
9	Elbow (Radiale) Height	255	40.38	0.12	1.89	0.08	4.68	35.4	46.8	11.4	.629
10	Knuckle Height (Metacarp. III)	255	27.95	0.10	1.56	0.07	5.58	23.1	32.9	9.8	.436
11	Waist Height	1331	39.92	0.06	2.05	0.04	5.14	33.4	47.6	14.2	.622
12	Crotch Height	1331	30.07	0.05	1.72	0.03	5.72	24.6	36.2	11.6	.469
13	Hip (Trochanteric) Height	255	33.82	0.11	1.74	0.08	5.14	29.9	40.1	10.2	.527
14	Buttock Height	1331	32.99	0.05	1.84	0.04	5.58	27.7	40.7	13.0	.514
15	Gluteal Furrow Height	255	29.18	0.10	1.60	0.07	5.48	24.5	34.6	10.1	.455
16	Kneecap (Patella) Height	1331	18.86	0.03	1.04	0.02	5.51	15.5	22.9	7.4	.294
17	Tibiale Height	255	17.34	0.06	0.97	0.04	5.59	14.6	20.4	5.8	.270
18	Calf Height	1331	12.81	0.02	0.91	0.02	7.10	10.0	15.9	5.9	.200
19	Acromion-Radiale Length	255	12.14	0.04	0.66	0.03	5.44	10.5	14.6	4.1	.189
20	Radiale-Stylelion Length	255	9.60	0.04	0.58	0.03	6.04	8.3	11.8	3.5	.150

TABLE 23. STATISTICAL VALUES FOR U. S. ARMY WOMEN - 1977 (continued)

No.	Measurements	N	Values in Inches						Range		Stature ratio
			Mean	SE(M)	S.D.	SE(SD)	V(%)	Min.	Max.	Total	
SITTING MEASUREMENTS											
21	Sitting Height	1331	33.49	0.04	1.41	0.03	4.21	28.8	37.9	9.1	.521
22	Eye Height, Sitting	1331	28.99	0.04	1.36	0.03	4.69	24.6	33.1	8.5	.452
23	Shoulder-Elbow Length	1331	13.21	0.02	0.69	0.01	5.22	10.7	15.8	5.1	.206
24	Elbow-Grip Length	255	12.70	0.04	0.69	0.03	5.43	10.9	14.8	3.9	.198
25	Elbow-Fingertip Length	1331	17.13	0.02	0.90	0.02	5.25	14.6	20.1	5.5	.267
26	Elbow Rest Height	255	8.16	0.07	1.08	0.05	13.24	4.4	11.0	6.6	.127
27	Thigh Clearance Height	255	6.07	0.03	0.52	0.02	8.57	4.8	7.8	3.0	.095
28	Knee Height, Sitting	1331	20.08	0.03	1.03	0.02	5.13	17.1	23.9	6.8	.313
29	Popliteal Height, Sitting	1331	16.41	0.03	0.93	0.02	5.67	13.7	19.3	5.6	.256
30	Buttock-Knee Length	1331	22.78	0.03	1.21	0.02	5.31	19.2	27.0	7.8	.355
DEPTH AND BREADTH MEASUREMENTS											
31	Bust Depth	1331	9.02	0.02	0.88	0.02	9.76	6.1	13.1	7.0	.141
32	Waist Depth	1331	7.20	0.02	0.87	0.02	12.08	5.3	12.9	7.6	.112
33	Abdom. Ext. Depth, Sitting	255	8.63	0.06	1.02	0.05	11.82	6.9	12.4	5.5	.135
34	Chest Breadth	1331	11.12	0.02	0.73	0.01	6.56	9.3	16.1	6.8	.173
35	Waist Breadth	1331	10.07	0.03	0.97	0.02	9.63	7.6	15.7	8.1	.157
36	Bispinous Breadth	255	9.16	0.05	0.87	0.04	9.50	7.0	11.8	4.8	.143
37	Hip Breadth, Standing	1331	13.92	0.03	0.97	0.02	7.00	11.2	19.3	8.1	.217
38	Biacromial Breadth	255	14.06	0.04	0.63	0.03	4.48	12.0	15.6	3.6	.219
39	Shoulder (Bideltoïd) Breadth	1331	16.55	0.02	0.88	0.02	5.32	14.3	22.1	7.8	.258
40	Abdom. Ext. Breadth, Sitting	255	11.80	0.07	1.18	0.05	10.00	8.8	15.5	6.7	.184
41	Thigh-to-Thigh Breadth, Sit.	255	15.07	0.08	1.29	0.06	8.56	11.8	18.8	7.0	.235

TABLE 23. STATISTICAL VALUES FOR U. S. ARMY WOMEN - 1977 (continued)

No.	Measurements	N	Values in Inches					Range		Stature ratio	
			Mean	SE(M)	S.D.	SE(SD)	V(%)	Min.	Max.		Total
CIRCUMFERENCES											
42	Neck Circumference	1331	12.74	0.02	0.62	0.01	4.87	10.8	16.4	5.6	.199
43	Shoulder Circumference	1331	39.52	0.06	2.15	0.04	5.44	34.0	55.1	21.1	.616
44	Chest Circumference at Scye	1331	33.68	0.06	2.05	0.04	6.09	28.3	47.5	19.2	.525
45	Bust Circumference	1331	34.73	0.07	2.53	0.05	7.28	27.1	50.6	23.5	.541
46	Chest Circum. below Bust	1331	29.46	0.05	1.98	0.04	6.72	24.6	42.3	17.7	.459
47	Waist Circumference (Natural)	1331	27.96	0.07	2.72	0.05	9.73	22.2	46.3	24.1	.436
48	Waist Circum. (Omphalion)	255	30.01	0.19	3.10	0.14	10.33	23.7	42.9	19.2	.468
49	Hip (Buttock) Circumference	1331	37.61	0.07	2.51	0.05	6.67	30.5	53.0	22.5	.586
50	Hip (Buttock) Circum., Sitting	255	38.62	0.17	2.69	0.12	6.97	32.2	49.3	17.1	.602
51	Vert. Trunk Circum., Standing	1331	60.57	0.08	2.86	0.06	4.72	51.3	73.3	22.0	.944
52	Vert. Trunk Circum., Sitting	255	57.65	0.18	2.86	0.13	4.96	49.4	65.2	15.8	.899
LIMB CIRCUMFERENCES											
53	Scye Circumference	1331	14.77	0.03	0.95	0.02	6.43	11.9	20.2	8.3	.230
54	Axillary Arm Circumference	255	10.88	0.06	1.02	0.05	9.38	8.9	14.5	5.6	.170
55	Biceps Circum., Relaxed	255	10.19	0.06	1.01	0.04	9.91	8.0	13.5	5.5	.159
56	Biceps Circum., Flexed	1331	10.58	0.02	0.90	0.02	8.51	8.2	15.5	7.3	.165
57	Elbow Circum., Flexed	1331	10.23	0.02	0.64	0.01	6.26	8.5	13.0	4.5	.159
58	Forearm Circum., Relaxed	255	9.16	0.04	0.59	0.03	6.44	8.0	11.3	3.3	.143
59	Forearm Circum., Flexed	1331	9.70	0.02	0.60	0.01	6.19	8.0	13.0	5.0	.151
60	Wrist Circumference	1331	5.79	0.01	0.27	0.01	4.66	5.1	6.9	1.8	.090
61	Upper Thigh Circumference	1331	22.41	0.05	1.81	0.04	8.08	17.0	31.5	14.5	.349
62	Knee Circumference	1331	13.71	0.02	0.89	0.02	6.49	11.3	18.0	6.7	.214
63	Calf Circumference	1331	13.82	0.03	0.99	0.02	7.16	11.0	18.7	7.7	.215
64	Ankle Circumference	1331	8.16	0.01	0.49	0.01	6.00	6.6	9.8	3.2	.127

TABLE 23. STATISTICAL VALUES FOR U. S. ARMY WOMEN - 1977 (continued)

No.	Measurements	N	Values in Inches					Range		Stature ratio	
			Mean	SE(M)	S.D.	SE(SD)	V(%)	Min.	Max.		Total
SURFACE MEASUREMENTS											
65	Shoulder Length	1331	5.91	0.01	0.42	0.01	7.11	4.6	7.4	2.8	.092
66	Interscye, Back	1331	14.90	0.03	0.93	0.02	6.24	12.0	18.8	6.8	.232
67	Interscye, Front	1331	13.06	0.02	0.69	0.01	5.28	11.2	15.9	4.7	.204
68	Back Curvature - Bust Level	1331	16.52	0.03	1.25	0.02	7.57	12.0	24.6	12.6	.257
69	Back Curvature - Waist Level	1331	13.90	0.04	1.37	0.03	9.86	10.7	23.3	12.6	.217
70	Back Curvature - Hip Level	1331	18.70	0.04	1.47	0.03	7.86	14.1	27.0	12.9	.291
71	Waist Back Length	1331	16.08	0.03	1.04	0.02	6.47	13.3	20.3	7.0	.251
72	Waist Front Length	1331	14.46	0.03	1.03	0.02	7.12	11.6	18.8	7.2	.225
73	Neck to Bustpoint Length	1331	9.95	0.02	0.82	0.02	8.24	7.5	13.0	5.5	.155
74	Axilla to Waist Length	1331	9.09	0.03	0.99	0.02	10.89	6.4	13.8	7.4	.142
75	Sleeve Inseam Length	1331	17.74	0.03	1.03	0.02	5.81	14.4	21.5	7.1	.276
76	Sleeve Outseam Length	1331	21.18	0.03	1.17	0.02	5.52	17.5	25.4	7.9	.330
77	Crotch Length	1331	28.71	0.06	2.15	0.04	7.49	20.7	39.4	8.7	.447
HEAD AND FACE MEASUREMENTS											
78	Head Circumference	1331	21.62	0.02	0.64	0.01	2.96	19.57	24.09	4.52	.337
79	Sagittal Arc	216	13.24	0.04	0.61	0.03	4.61	11.77	15.31	3.54	.206
80	Bitrignon-Coronal Arc	216	13.08	0.03	0.50	0.02	3.82	11.89	15.08	3.19	.204
81	Bitrignon-Frontal Arc	216	11.18	0.03	0.40	0.02	3.58	10.12	12.28	2.16	.174
82	Bitrignon-Menton Arc	216	11.56	0.04	0.52	0.03	4.50	10.20	13.15	2.95	.180
83	Bitrignon-Submandibular Arc	216	10.43	0.04	0.53	0.03	5.08	9.13	12.01	2.88	.163
84	Head Length	1331	7.37	0.01	0.26	0.01	3.53	6.38	8.19	1.81	.115
85	Glabella to back of head	216	7.58	0.03	0.39	0.02	5.15	6.46	8.98	2.52	.118
86	Sellion to back of head	216	7.94	0.03	0.38	0.02	4.79	6.93	9.41	2.48	.124
87	Pronasale to back of head	216	8.46	0.03	0.38	0.02	4.49	7.44	9.84	2.40	.132

TABLE 23. STATISTICAL VALUES FOR U. S. ARMY WOMEN - 1977 (continued)

No.	Measurements	N	Values in Inches					Range		Stature ratio	
			Mean	SE(M)	S.D.	SE(SD)	V(%)	Min.	Max.		Total
HEAD AND FACE MEASUREMENTS (continued)											
88	Subnasale to back of head	216	7.92	0.03	0.39	0.02	4.92	6.89	9.33	2.44	.123
89	Lip Protrusion to back of head	216	7.91	0.03	0.46	0.02	5.82	6.89	9.53	2.64	.123
90	Menton to back of head	216	7.67	0.03	0.43	0.02	5.61	6.69	8.98	2.29	.120
91	Ectocanthus to back of head	216	6.76	0.03	0.37	0.02	5.47	5.83	8.23	2.40	.105
92	Tragion to back of head	216	3.95	0.02	0.36	0.02	9.11	3.31	5.31	2.00	.062
93	Head Breadth	1331	5.75	0.01	0.21	0.00	3.65	5.12	6.50	1.38	.090
94	Bitragion Breadth	216	5.11	0.01	0.21	0.01	4.11	4.53	5.75	1.22	.080
95	Head Height (Tragion-t. of h.)	216	5.19	0.02	0.26	0.01	5.01	4.41	6.14	1.73	.081
96	Ectocanthus to top of head	216	4.78	0.02	0.32	0.02	6.69	3.90	6.30	2.40	.074
97	Glabella to top of head	216	3.32	0.02	0.34	0.02	10.24	2.52	5.00	2.48	.052
98	Sellion to top of head	216	3.96	0.03	0.37	0.02	9.34	2.91	5.67	2.76	.062
99	Pronasale to top of head	216	5.33	0.03	0.39	0.02	7.32	4.33	7.09	2.76	.083
100	Subnasale to top of head	216	5.83	0.03	0.37	0.02	6.35	4.92	7.64	2.72	.091
101	Stomion to top of head	216	6.63	0.03	0.40	0.02	6.03	5.67	8.58	2.91	.103
102	Menton to top of head	216	8.22	0.03	0.40	0.02	4.87	7.28	9.88	2.60	.128
103	Face Length (Menton-Sellion)	216	4.21	0.01	0.22	0.01	5.23	3.74	4.84	1.10	.066
104	Menton-Crinion	216	6.92	0.02	0.33	0.02	4.77	5.98	7.95	1.97	.108
105	Minimum Frontal Breadth	216	4.14	0.01	0.20	0.01	4.83	3.62	4.80	1.18	.065
106	Face Breadth (Bizygomatic)	216	5.20	0.01	0.21	0.01	4.04	4.57	5.71	1.14	.081
107	Biocular Breadth	216	3.79	0.01	0.20	0.01	5.28	3.23	4.33	1.10	.059
108	Interpupillary Breadth	216	2.29	0.01	0.17	0.01	7.42	1.77	2.76	0.99	.036
109	Nose Length (Subnas.-Sellion)	216	1.80	0.01	0.13	0.01	7.22	1.46	2.20	0.74	.028
110	Nose Breadth	216	1.34	0.01	0.18	0.01	13.43	0.98	1.85	0.87	.021
111	Mouth Breadth, Smiling	216	2.31	0.01	0.22	0.01	9.52	1.77	2.99	1.22	.036

TABLE 23. STATISTICAL VALUES FOR U. S. ARMY MEN - 1977 (continued)

No.	Measurements	N	Mean	SE(M)	S.D.	SE(SD)	V(%)	Values in Inches			Stature ratio
								Min.	Range Max.	Total	
HAND MEASUREMENTS											
112	Hand Length	1331	6.87	0.01	0.35	0.01	5.09	5.87	8.03	2.16	.107
113	Palm Length	1331	3.89	0.01	0.21	0.00	5.40	3.23	4.57	1.34	.061
114	Hand Breadth	1331	3.08	0.00	0.15	0.00	4.87	2.60	3.58	0.98	.048
115	Hand Circumference	1331	7.26	0.01	0.34	0.01	4.68	6.22	8.35	2.13	.113
FOOT MEASUREMENTS											
116	Foot Length	1331	9.57	0.01	0.49	0.01	5.12	8.23	11.73	3.50	.149
117	Instep Length	1331	7.03	0.01	0.39	0.01	5.55	5.91	8.46	2.55	.110
118	Foot Breadth	1331	3.49	0.01	0.20	0.00	5.73	2.95	4.25	1.30	.054
119	Heel Breadth	1331	2.40	0.00	0.16	0.00	6.67	1.97	2.99	1.02	.037
120	Ball of Foot Circumference	1331	8.90	0.01	0.45	0.01	5.06	7.68	10.71	3.03	.139
121	Instep Circumference	1331	9.24	0.01	0.50	0.01	5.41	7.91	10.91	3.00	.144
122	Heel-Ankle Circumference	1331	12.12	0.02	0.57	0.01	4.70	10.55	14.21	3.66	.189
123	Ankle Height	1331	4.27	0.01	0.40	0.01	9.37	3.15	5.87	2.72	.067
124	Sphyrion Height	1331	2.54	0.01	0.21	0.00	8.27	1.81	3.31	1.50	.040
SKINFOLD THICKNESS MEASUREMENTS											
125	Subscapular Skinfold	255	0.55	0.02	0.24	0.01	43.64	0.24	1.38	1.14	
126	Triceps Skinfold	255	0.69	0.01	0.20	0.01	28.99	0.28	1.38	1.10	
127	Biceps Skinfold	255	0.33	0.01	0.15	0.01	45.45	0.08	0.87	0.79	
128	Suprailiac Skinfold	255	0.66	0.02	0.28	0.01	42.42	0.04	1.54	1.50	
	Age (years)	1331	23.10	0.15	5.40	0.13	23.38	17.0	60.0	43.0	

TABLE 24. PERCENTILE VALUES FOR U. S. ARMY WOMEN - 1977

No.	Measurements	Percentiles in Inches										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		99th
1	Weight (pounds)	94.2	97.1	102.8	108.7	119.3	131.4	143.6	155.8	164.3	175.7	184.8	90.6
STANDING MEASUREMENTS													
2	Stature	58.3	59.0	60.1	60.9	62.4	64.1	65.9	67.6	68.5	69.6	70.2	11.9
3	Cervicale Height	50.0	50.3	51.2	52.1	53.7	55.3	56.7	58.0	59.0	60.4	61.8	11.8
4	Shoulder (Acromiale) Height	47.4	48.0	48.8	49.5	50.9	52.5	54.2	55.7	56.6	57.5	58.1	10.7
5	Axilla Height	43.6	44.2	45.0	45.7	47.0	48.5	50.0	51.4	52.3	53.1	53.6	10.0
6	Suprasternale Height	47.5	47.9	48.6	49.3	50.7	52.2	53.7	55.0	55.9	57.0	58.0	10.5
7	Bustpoint Height	41.8	42.2	43.0	43.8	45.0	46.5	48.1	49.5	50.3	51.2	51.8	10.0
8	Substernale Height	40.7	41.0	41.7	42.4	43.5	44.8	46.1	47.3	48.1	49.2	50.0	9.3
9	Elbow (Radiale) Height	36.6	36.9	37.4	37.9	39.0	40.3	41.7	42.9	43.6	44.4	44.9	8.3
10	Knuckle Height (Meta. III)	24.4	24.8	25.4	26.0	26.9	27.9	29.0	30.0	30.5	31.0	31.3	6.9
11	Waist Height	35.3	35.9	36.7	37.4	38.5	39.8	41.2	42.6	43.4	44.4	45.0	9.7
12	Crotch Height	26.3	26.7	27.4	27.9	28.8	30.0	31.2	32.4	33.0	33.8	34.2	7.9
13	Hip (Trochanteric) Height	30.3	30.5	31.0	31.5	32.6	33.8	35.0	36.0	36.7	37.4	38.0	7.7
14	Buttock Height	29.1	29.5	30.1	30.6	31.7	32.9	34.2	35.4	36.1	37.1	37.8	8.7
15	Gluteal Furrow Height	25.8	26.2	26.7	27.2	28.1	29.1	30.2	31.2	31.9	32.7	33.3	7.5

TABLE 24. PERCENTILE VALUES FOR U. S. ARMY WOMEN - 1977 (continued)

No.	Measurements	Percentiles in Inches										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		99th
STANDING MEASUREMENTS (continued)													
16	Kneecap (Patella) Height	16.6	16.8	17.2	17.6	18.1	18.8	19.6	20.3	20.7	21.1	21.3	4.7
17	Tibiale Height	15.2	15.4	15.7	16.1	16.7	17.3	18.0	18.6	19.0	19.5	19.9	4.7
18	Calf Height	10.9	11.1	11.4	11.7	12.2	12.8	13.4	14.0	14.4	14.8	15.1	4.2
19	Acromion-Radiale Length	10.7	10.8	11.1	11.3	11.7	12.2	12.6	12.9	13.2	13.5	13.8	3.1
20	Radiale-Sytlion Length	8.4	8.5	8.7	8.9	9.2	9.6	10.0	10.4	10.6	10.9	11.0	2.6
SITTING MEASUREMENTS													
21	Sitting Height	30.0	30.5	31.1	31.7	32.6	33.5	34.5	35.3	35.8	36.2	36.5	6.5
22	Eye Height, Sitting	25.7	26.1	26.6	27.2	28.1	29.0	29.9	30.7	31.2	31.7	32.1	6.4
23	Shoulder-Elbow Length	11.7	11.9	12.1	12.4	12.7	13.2	13.7	14.1	14.4	14.7	14.8	3.1
24	Elbow-Grip Length	11.2	11.4	11.6	11.9	12.2	12.6	13.1	13.6	13.9	14.3	14.5	3.3
25	Elbow-Fingertip Length	15.2	15.4	15.7	16.0	16.5	17.1	17.7	18.3	18.7	19.1	19.4	4.2
26	Elbow Rest Height	5.8	6.0	6.3	6.7	7.4	8.2	8.9	9.5	9.9	10.3	10.6	4.8
27	Thigh Clearance Height	4.9	5.0	5.2	5.4	5.7	6.1	6.4	6.7	6.9	7.2	7.5	2.6

TABLE 24. PERCENTILE VALUES FOR U. S. ARMY WOMEN - 1977 (continued)

No.	Measurements	Percentiles in Inches										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		99th
SITTING MEASUREMENTS (continued)													
28	Knee Height, Sitting	17.9	18.1	18.5	18.8	19.4	20.0	20.8	21.4	21.8	22.3	22.6	4.7
29	Popliteal Height, Sitting	14.3	14.6	15.0	15.3	15.8	16.4	17.0	17.6	18.0	18.4	18.6	4.3
30	Buttock-Knee Length	20.1	20.4	20.9	21.3	21.9	22.7	23.6	24.4	24.9	25.4	25.7	5.6
DEPTH AND BREADTH MEASUREMENTS													
31	Bust Depth	7.3	7.5	7.7	8.0	8.4	9.0	9.6	10.2	10.6	11.1	11.4	4.1
32	Waist Depth	5.7	5.8	6.0	6.2	6.6	7.1	7.6	8.3	8.8	9.4	9.9	4.2
33	Abdom. Ext. Depth, Sitting	6.9	7.0	7.3	7.5	7.9	8.5	9.1	10.0	10.6	11.5	12.3	5.4
34	Chest Breadth	9.6	9.8	10.0	10.2	10.6	11.1	11.6	12.0	12.4	12.8	13.1	3.5
35	Waist Breadth	8.3	8.5	8.7	9.0	9.4	10.0	10.6	11.3	11.8	12.5	13.0	4.7
36	Bispirous Breadth	7.2	7.5	7.9	8.2	8.6	9.1	9.7	10.4	10.8	11.3	11.7	4.5
37	Hip Breadth, Standing	11.9	12.1	12.4	12.7	13.3	13.9	14.5	15.2	15.6	16.1	16.5	4.6
38	Biacromial Breadth	12.7	12.8	13.0	13.2	13.6	14.1	14.5	14.9	15.1	15.4	15.6	2.9
39	Shoulder (Bidel.) Breadth	14.7	14.8	15.1	15.4	15.9	16.5	17.1	17.6	18.0	18.4	18.7	4.0

TABLE 24. PERCENTILE VALUES FOR U. S. ARMY WOMEN - 1977 (continued)

No.	Measurements	Percentiles in Inches								Range (1st-99th)			
		1st	2nd	5th	10th	25th	Median 50th	75th	90th		95th	98th	99th
BREADTH MEASUREMENTS (continued)													
40	Abdom. Ext. Breadth, Sitting	9.4	9.7	10.1	10.4	11.0	11.7	12.5	13.4	13.9	14.5	14.9	5.5
41	Thigh-to-Thigh Breadth, Sit.	12.5	12.6	13.0	13.4	14.2	15.0	15.9	16.7	17.3	18.0	18.5	6.0
CIRCUMFERENCES													
42	Neck Circumference	11.4	11.6	11.8	12.0	12.3	12.7	13.1	13.5	13.8	14.1	14.3	2.9
43	Shoulder Circumference	35.2	35.5	36.2	36.8	38.1	39.4	40.9	42.2	43.1	44.2	45.0	9.8
44	Chest Circum. at Scye	29.6	29.9	30.5	31.1	32.3	33.6	34.9	36.2	37.1	38.3	39.2	9.6
45	Bust Circumference	30.0	30.2	30.8	31.6	33.0	34.6	36.2	37.9	39.0	40.5	41.7	11.7
46	Chest Circum. below Bust	26.0	26.1	26.5	27.0	28.1	29.3	30.6	31.9	32.8	34.1	35.1	9.1
47	Waist Circum. (Natural)	23.2	23.6	24.3	24.9	26.1	27.6	29.4	31.4	32.9	34.8	36.4	13.2
48	Waist Circum. (Omphalion)	24.6	25.1	25.8	26.4	27.7	29.6	31.9	34.3	35.8	37.5	38.6	14.0
49	Hip (Buttock) Circumference	32.1	32.7	33.7	34.5	35.9	37.5	39.1	40.7	41.8	43.1	44.2	12.1
50	Hip (Buttock) Circum., Sit.	33.5	33.9	34.5	35.3	36.7	38.5	40.3	42.1	43.2	44.6	45.6	12.1
51	Vert. Trunk Circum., Stand.	53.7	54.7	56.0	57.0	58.7	60.5	62.4	64.2	65.4	66.7	67.6	13.9
52	Vert. Trunk Circum., Sitting	51.9	52.2	53.1	54.0	55.6	57.6	59.6	61.4	62.5	63.7	64.6	12.7

TABLE 24. PERCENTILE VALUES FOR U. S. ARMY WOMEN - 1977 (continued)

No.	Measurements	Percentiles in Inches										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		99th
LIMB CIRCUMFERENCES													
53	Scye Circumference	12.8	13.0	13.3	13.6	14.1	14.7	15.3	16.0	16.4	17.0	17.4	4.6
54	Axillary Arm Circumference	8.9	9.1	9.3	9.6	10.2	10.8	11.5	12.2	12.7	13.3	13.7	4.8
55	Biceps Circum., Relaxed	8.3	8.4	8.5	8.8	9.5	10.2	10.8	11.3	11.9	12.9	13.2	4.9
56	Biceps Circum., Flexed	8.6	8.8	9.1	9.4	10.0	10.6	11.1	11.7	12.1	12.6	13.0	4.4
57	Elbow Circum., Flexed	8.8	9.0	9.2	9.4	9.8	10.2	10.6	11.0	11.3	11.7	11.9	3.1
58	Forearm Circum., Relaxed	8.1	8.1	8.3	8.4	8.7	9.1	9.6	10.0	10.2	10.5	10.6	2.5
59	Forearm Circum., Flexed	8.3	8.5	8.7	8.9	9.3	9.7	10.1	10.5	10.7	11.0	11.1	2.8
60	Wrist Circumference	5.2	5.3	5.4	5.4	5.6	5.8	6.0	6.1	6.2	6.3	6.4	1.2
61	Upper Thigh Circumference	18.3	18.7	19.4	20.1	21.2	22.4	23.6	24.6	25.4	26.4	27.2	8.9
62	Knee Circumference	11.9	12.0	12.3	12.6	13.1	13.7	14.3	14.8	15.2	15.7	16.1	4.2
63	Calf Circumference	11.7	11.9	12.2	12.5	13.1	13.8	14.5	15.1	15.4	15.9	16.3	4.6
64	Ankle Circumference	7.0	7.2	7.4	7.5	7.8	8.2	8.5	8.8	9.0	9.2	9.4	2.4

TABLE 24. PERCENTILE VALUES FOR U. S. ARMY WOMEN - 1977 (continued)

No.	Measurements	Percentiles in Inches										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		99th
SURFACE MEASUREMENTS													
65	Shoulder Length	4.9	5.0	5.2	5.4	5.6	5.9	6.2	6.4	6.6	6.8	7.0	2.1
66	Interscye, Back	12.8	13.0	13.4	13.7	14.3	14.9	15.5	16.1	16.4	16.8	17.2	4.4
67	Interscye, Front	11.6	11.7	12.0	12.2	12.6	13.0	13.5	14.0	14.2	14.6	14.8	3.2
68	Back Curvature - Bust Level	13.9	14.2	14.6	15.0	15.7	16.5	17.3	18.1	18.6	19.4	19.9	6.0
69	Back Curvature - Waist Level	11.4	11.7	12.0	12.4	13.0	13.7	14.6	15.6	16.4	17.4	18.2	6.8
70	Back Curvature - Hip Level	15.6	15.9	16.5	16.9	17.7	18.6	19.6	20.6	21.2	22.0	22.6	7.0
71	Waist Back Length	13.9	14.1	14.4	14.8	15.4	16.0	16.8	17.4	17.9	18.4	18.7	4.8
72	Waist Front Length	12.4	12.6	12.9	13.2	13.7	14.4	15.1	15.8	16.3	16.9	17.4	5.0
73	Neck to Bustpoint Length	8.3	8.4	8.6	8.9	9.4	9.9	10.5	11.0	11.3	11.7	12.0	3.7
74	Axilla to Waist Length	7.1	7.3	7.6	7.9	8.4	9.0	9.7	10.4	10.8	11.5	12.1	5.0
75	Sleeve Inseam Length	15.5	15.8	16.1	16.4	17.0	17.7	18.4	19.1	19.5	20.0	20.3	4.8
76	Sleeve Outseam Length	18.6	18.9	19.4	19.7	20.4	21.1	22.0	22.8	23.2	23.6	23.9	5.3
77	Crotch Length	22.9	23.8	25.1	26.0	27.4	28.8	30.1	31.3	32.1	33.0	33.6	10.7

TABLE 24. PERCENTILE VALUES FOR U. S. ARMY WOMEN - 1977 (continued)

No.	Measurements	Percentiles in Inches										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		99th
HEAD AND FACE MEASUREMENTS													
78	Head Circumference	20.22	20.37	20.61	20.82	21.18	21.60	22.03	22.45	22.73	23.07	23.33	3.11
79	Sagittal Arc	12.05	12.20	12.26	12.46	12.78	13.24	13.64	14.00	14.20	14.61	15.04	2.99
80	Bitrignon-Coronal Arc	12.01	12.13	12.31	12.47	12.74	13.06	13.40	13.72	13.93	14.17	14.33	2.32
81	Bitrignon-Frontal Arc	10.28	10.35	10.50	10.65	10.90	11.18	11.44	11.69	11.85	12.05	12.20	1.92
82	Bitrignon-Menton Arc	10.35	10.51	10.74	10.92	11.22	11.54	11.89	12.23	12.45	12.72	12.87	2.52
83	Bitrignon-Submandibular Arc	9.25	9.41	9.63	9.79	10.05	10.39	10.78	11.16	11.37	11.54	11.61	2.36
84	Head Length	6.72	6.81	6.93	7.03	7.19	7.36	7.54	7.70	7.80	7.91	7.98	1.26
85	Glabella to back of head	6.73	6.89	7.03	7.14	7.32	7.53	7.79	8.09	8.29	8.54	8.74	2.01
86	Sellion to back of head	7.13	7.24	7.41	7.52	7.68	7.88	8.14	8.44	8.65	8.90	9.06	1.93
87	Pronasale to back of head	7.64	7.76	7.90	8.02	8.21	8.43	8.69	8.96	9.15	9.37	9.53	1.89
88	Subnasale to back of head	7.09	7.20	7.34	7.45	7.64	7.87	8.14	8.43	8.63	8.86	9.02	1.93
89	Lip Protrusion to b. of h.	7.09	7.17	7.27	7.39	7.60	7.86	8.17	8.51	8.75	9.06	9.33	2.24
90	Menton to back of head	6.77	6.85	7.02	7.15	7.37	7.63	7.94	8.24	8.44	8.66	8.82	2.05
91	Ectocanthus to back of head	6.02	6.10	6.22	6.33	6.51	6.72	6.96	7.22	7.42	7.68	7.87	1.85
92	Trignon to back of head	3.39	3.39	3.47	3.55	3.70	3.91	4.16	4.42	4.61	4.88	5.08	1.69

TABLE 24. PERCENTILE VALUES FOR U. S. ARMY WOMEN - 1977 (continued)

No.	Measurements	Percentiles in Inches										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		99th
HEAD AND FACE MEASUREMENTS (continued)													
93	Head Breadth	5.28	5.34	5.42	5.49	5.61	5.74	5.89	6.03	6.12	6.24	6.32	1.04
94	Bitragion Breadth	4.57	4.65	4.76	4.84	4.97	5.11	5.25	5.38	5.45	5.55	5.59	1.02
95	Head Height (Trag.-t. of h.)	4.65	4.68	4.77	4.86	5.02	5.19	5.37	5.52	5.62	5.75	5.83	1.18
96	Ectocanthus to top of head	4.02	4.13	4.27	4.38	4.57	4.78	4.98	5.17	5.26	5.35	5.39	1.37
97	Glabella to top of head	2.64	2.68	2.79	2.90	3.09	3.31	3.54	3.75	3.88	4.06	4.17	1.53
98	Sellion to top of head	3.15	3.23	3.37	3.49	3.72	3.97	4.20	4.41	4.52	4.65	4.76	1.61
99	Pronasale to top of head	4.49	4.57	4.70	4.83	5.07	5.34	5.60	5.83	5.96	6.10	6.18	1.69
100	Subnasale to top of head	4.96	5.08	5.25	5.38	5.58	5.81	6.06	6.30	6.44	6.57	6.65	1.69
101	Stomion to top of head	5.79	5.87	5.99	6.12	6.36	6.62	6.88	7.10	7.24	7.40	7.52	1.73
102	Menton to top of head	7.36	7.44	7.59	7.72	7.94	8.21	8.48	8.74	8.89	9.06	9.17	1.81
103	Face Length (Menton-Sellion)	3.74	3.82	3.89	3.95	4.04	4.18	4.36	4.53	4.63	4.72	4.76	1.02
104	Menton-Crinion	6.18	6.26	6.38	6.50	6.70	6.92	7.14	7.34	7.46	7.60	7.68	1.50

TABLE 24. PERCENTILE VALUES FOR U. S. ARMY WOMEN - 1977 (continued)

No.	Measurements	Percentiles in Inches										Range 99th (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		
HEAD AND FACE MEASUREMENTS (continued)													
105	Minimum Frontal Breadth	3.74	3.78	3.82	3.88	4.00	4.14	4.27	4.40	4.47	4.57	4.65	0.91
106	Face Breadth (Bizygomatic)	4.68	4.72	4.83	4.92	5.07	5.21	5.34	5.45	5.53	5.63	5.75	1.07
107	Biocular Breadth	3.35	3.43	3.47	3.53	3.65	3.78	3.92	4.05	4.12	4.21	4.25	0.90
108	Interpupillary Breadth	1.93	1.93	2.00	3.06	2.17	2.29	2.41	2.51	2.57	2.64	2.72	0.79
109	Nose Length (Subnas.-Sell.)	1.50	1.54	1.61	1.65	1.72	1.80	1.89	1.98	2.03	2.09	2.09	0.59
110	Nose Breadth	1.02	1.06	1.13	1.16	1.21	1.30	1.42	1.63	1.70	1.77	1.81	0.79
111	Mouth Breadth, Smiling	1.85	1.89	1.95	2.03	2.16	2.31	2.47	2.60	2.67	2.76	2.80	0.95
HAND MEASUREMENTS													
112	Hand Length	6.10	6.19	6.32	6.43	6.62	6.84	7.10	7.35	7.50	7.65	7.74	1.64
113	Palm Length	3.45	3.49	3.56	3.63	3.75	3.88	4.03	4.16	4.24	4.33	4.40	0.95
114	Hand Breadth	2.74	2.77	2.83	2.88	2.97	3.08	3.18	3.28	3.33	3.39	3.43	0.69
115	Hand Circumference	6.51	6.59	6.71	6.83	7.02	7.26	7.49	7.70	7.82	7.95	8.02	1.51

TABLE 24. PERCENTILE VALUES FOR U. S. ARMY WOMEN - 1977 (continued)

No.	Measurements	Percentiles in Inches										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		
FOOT MEASUREMENTS													
116	Foot Length	8.50	8.62	8.80	8.96	9.23	9.55	9.89	10.22	10.42	10.65	10.81	2.31
117	Instep Length	6.17	6.27	6.41	6.54	6.76	7.02	7.28	7.54	7.70	7.89	8.02	1.85
118	Foot Breadth	3.04	3.09	3.17	3.24	3.35	3.49	3.62	3.75	3.83	3.93	4.00	0.96
119	Heel Breadth	2.05	2.09	2.15	2.20	2.28	2.38	2.50	2.61	2.69	2.77	2.82	0.77
120	Ball of Foot Circumference	7.93	8.01	8.17	8.32	8.59	8.89	9.19	9.47	9.65	9.89	10.07	2.14
121	Instep Circumference	8.20	8.30	8.46	8.62	8.90	9.22	9.56	9.90	10.11	10.36	10.54	2.34
122	Heel-Ankle Circumference	10.89	11.02	11.21	11.40	11.73	12.10	12.49	12.87	13.11	13.40	13.61	2.72
123	Ankle Height	3.42	3.49	3.63	3.77	4.00	4.26	4.52	4.77	4.95	5.19	5.38	1.96
124	Sphyrion Height	2.04	2.09	2.18	2.27	2.40	2.55	2.69	2.81	2.89	2.98	3.05	1.01
SKINFOLD THICKNESS MEASUREMENTS													
125	Subscapular Skinfold			0.27	0.30	0.39	0.50	0.66	0.97	1.07			
126	Triceps Skinfold			0.37	0.44	0.56	0.70	0.82	0.93	1.02			
127	Biceps Skinfold			0.12	0.15	0.23	0.31	0.43	0.52	0.59			
128	Suprailiac Skinfold			0.28	0.34	0.46	0.64	0.84	1.06	1.19			
	Age (years)	17.2	17.4	17.7	18.0	19.1	22.0	25.1	29.3	33.6	40.0	45.7	28.5

Mean Age - 23.10 years Number of women - 1331

Mean Age - 23.10 years Number of women - 1331

5. U. S. ARMY BODY MEASUREMENTS

a. Tables of Body Measurements

The source data presented in the summary tables of the previous section show the anthropometric data available for the six series of Army personnel analyzed in this report. In order to facilitate direct comparisons of body measurements among these series, the anthropometric data have been rearranged and are presented in this section measurement by measurement. Thus the weights, the statures, the chest/bust circumferences, and all other measurements for the six series have been grouped together so that all values for any one measurement may be examined at a glance. However, not all measurements were taken on all of the series; in some cases a particular measurement may have been made on only two or three of the series. Measurements taken on only one of the series have not been included here, with the one exception of ear measurements. Based upon the anthropometric data available, a total of 118 body measurements have been collated in this way.

The body measurements have been grouped in the following sequence: Weight, Standing Measurements, Sitting Measurements, Depth and Breadth Measurements, Circumferences, Limb Circumferences, Surface Measurements, Head and Face Measurements, Hand Measurements, and Foot Measurements. The Standing Measurements consist of stature, measured from the floor to the top of the head, together with 16 heights on the body, also measured from the floor. Two arm segment lengths, measured with the subject standing, also are included here. The Sitting Measurements include six heights and five arm and leg segment lengths, all measured with the subject in a seated position. There are eight Depth and Breadth Measurements of the body, taken at the shoulders, chest, waist, or hips. Under Circumferences are listed the major girth measurements of the trunk (neck, shoulder, chest/bust, waist and hip), together with vertical trunk circumference. The Limb Circumferences include six girths of the arm and three of the leg. The Surface Measurements consist of 13 measurements taken with the tape lying along the surface of the body (or the arm); these are of use primarily in the drafting of clothing patterns. There are 38 detailed Head and Face Measurements listed here; these are used not only in the design and sizing of helmets and other headwear, but also for various types of protective masks for the face. Four basic Hand Measurements are given, as well as eight basic Foot Measurements.

The anthropometric data presented in these tables represent body measurements of men wearing only undershorts and of women wearing only bra and panties; thus they are essentially nude body measurements. Information on the terminology of body measurements may be found in the Appendix (page 286) of this report.

b. Tables of Statistical and Percentile Values in Centimeters

In the following tables, anthropometric data on U. S. Army men and women are given in centimeters for a total of 118 body measurements, together with age. The standard format adopted here for presentation of these data consists of tables on two facing pages. On the first or upper page (Table 25a), the statistical values are given, while on the second or lower facing page (Table 25b), the percentile values are shown. In this way, all of the data for both statistical values and percentile values for any body measurement may be found on the two facing pages.

The statistical and percentile values shown in these tables are the same as those given in the source tables of data in a previous section (see page 18). However due to the small size of the sample (287 men), only selected percentile values between the 5th and the 95th percentiles are given for the 1977 U. S. Army basic trainees.

Values are expressed in centimeters for all of the body measurements, while weight is shown in kilograms and age is given in years.

c. Index of Body Measurements in Centimeters

	Pages	
	Statistics	Percentiles
Weight	142	143
Standing Measurements	142	143
Sitting Measurements	148	149
Depth and Breadth Measurements	154	155
Circumferences	158	159
Limb Circumferences	160	161
Surface Measurements	164	165
Head and Face Measurements	170	171
Hand Measurements	184	185
Foot Measurements	186	187
Age	190	190

Similar tables of statistical and percentile values given in inches may be found beginning on page 191.

TABLE 25a. STATISTICAL VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977

No.	Measurements	Values in Centimeters							Stature ratio
		N	Mean	SE(N)	S.D.	SE(SD)	V(%)	Range Min. Max.	
1	Weight (kilograms)								
	Men - 1946	24,506	70.22	0.06	9.32	0.04	13.29	43.1 138.3	95.2
	Men - 1966	6677	72.23	0.13	10.60	0.09	14.68	45.2 128.7	83.5
	Men (Trainees) - 1966	2638	70.74	0.20	10.47	0.14	14.81	45.2 115.9	70.7
	Men (Trainees) - 1977	287	70.77	0.65	10.98	0.46	15.52	46.5 106.0	59.5
	Women - 1946	8107	59.63	0.10	9.00	0.07	15.10	39.0 111.6	72.6
2	Stature								
	Men - 1946	24,508	173.91	0.04	6.39	0.03	3.67	150.0 200.0	50.0
	Men - 1966	6682	174.52	0.08	6.61	0.06	3.79	151.8 199.7	47.9
	Men (Trainees) - 1966	2639	174.69	0.13	6.45	0.09	3.69	152.8 196.7	43.9
	Men (Trainees) - 1977	287	174.07	0.40	6.82	0.28	3.92	153.0 197.4	44.4
	Women - 1946	8121	162.14	0.07	6.00	0.05	3.71	141.0 184.0	43.0
3	Cervicale Height								
	Men - 1946	21,141	149.20	0.04	6.05	0.03	4.05	127.0 175.0	48.0
	Men - 1966	6682	149.56	0.08	6.34	0.05	4.24	127.8 173.7	45.9
	Men (Trainees) - 1966	2639	149.44	0.12	6.17	0.08	4.13	127.8 171.7	43.9
	Women - 1946	8121	138.26	0.06	5.63	0.04	4.09	121.0 159.0	38.0
	Women - 1977	255	140.28	0.38	6.02	0.27	4.29	126.3 161.9	35.6
4	Shoulder (acromiale) Height								
	Men - 1966	6682	143.72	0.08	6.22	0.05	4.33	123.2 167.2	44.0
	Men (Trainees) - 1966	2639	143.68	0.12	6.07	0.08	4.22	124.2 163.2	39.0
	Women - 1946	8118	134.08	0.06	5.51	0.04	4.12	115.0 157.0	42.0
	Women - 1977	1331	133.49	0.16	6.00	0.12	4.49	115.7 155.1	39.4

STANDING MEASUREMENTS

TABLE 25b. PERCENTILE VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977

No.	Measurements	Percentiles in Centimeters										Range (1st-99th)
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th	
1	Weight (kilograms)											
	Men - 1946	51.9	53.5	56.4	59.0	64.0	69.4	75.7	82.1	87.0	93.0	97.5
	Men - 1966	52.6	54.5	57.4	60.0	64.8	71.0	78.4	86.3	91.6	98.3	103.0
	Men (Trainees) - 1966	50.8	53.0	56.1	58.7	63.3	69.4	77.0	85.1	90.3	96.2	100.0
	Men (Trainees) - 1977			55.5	59.0	62.6	68.6	78.3	87.4	90.8		
	Women - 1946	44.0	45.3	47.4	49.4	53.2	58.3	64.7	71.7	76.5	82.4	86.6
2	Stature											
	Men - 1946	159.3	160.8	163.3	165.9	169.7	174.0	178.3	182.4	184.4	187.2	189.2
	Men - 1966	158.9	160.9	163.8	166.2	170.1	174.4	178.9	183.0	185.6	188.4	190.3
	Men (Trainees) - 1966	159.7	161.6	164.2	166.5	170.3	174.6	179.0	183.0	185.5	188.4	190.2
	Men (Trainees) - 1977			162.8	165.6	169.8	174.1	178.4	182.6	185.3		
	Women - 1946	148.6	150.1	152.4	154.5	158.0	162.0	166.2	169.9	172.2	174.8	176.6
3	Cervical Height											
	Men - 1946	135.1	136.7	139.2	141.5	145.0	149.1	153.2	157.0	159.3	161.8	163.6
	Men - 1966	134.4	136.5	139.3	141.6	145.3	149.5	153.8	157.8	160.2	162.6	164.1
	Men (Trainees) - 1966	134.8	136.7	139.4	141.7	145.3	149.4	153.6	157.5	159.8	162.1	163.5
	Women - 1946	125.5	127.0	129.2	131.1	134.4	138.1	142.0	145.5	147.7	150.2	151.9
	Women - 1977	126.9	127.8	130.0	132.3	136.4	140.5	144.0	147.3	149.8	153.5	156.9
4	Shoulder (acromiale) Height											
	Men - 1966	129.3	131.1	133.6	135.8	139.5	143.6	147.8	151.8	154.1	156.8	158.6
	Men (Trainees) - 1966	129.8	131.4	133.7	135.9	139.6	143.6	147.7	151.5	153.8	156.4	158.2
	Women - 1946	121.7	132.1	125.2	127.1	130.3	134.0	137.7	141.2	143.4	145.8	147.5
	Women - 1977	120.4	121.8	123.9	125.8	129.3	133.3	137.6	141.5	143.7	146.0	147.5

STANDING MEASUREMENTS

TABLE 25a. STATISTICAL VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	N	Values in Centimeters								Stature ratio	
			Mean	SE(M)	S.D.	SE(SD)	V(%)	Range		Total		
								Min.	Max.			
STANDING MEASUREMENTS (continued)												
5	Axilla Height											
	Men (Trainees) - 1977	287	131.24	0.35	5.89	0.25	4.49	113.3	149.7	36.4	.754	
	Women - 1977	1331	123.25	0.15	5.58	0.11	4.53	104.5	142.1	37.6	.756	
6	Suprasternale Height											
	Men (Trainees) - 1977	287	142.70	0.36	6.09	0.25	4.26	124.6	162.7	38.1	.820	
	Women - 1977	255	132.62	0.35	5.65	0.25	4.26	119.4	152.2	32.8	.814	
7	Chest/Bustpoint Height											
	Men (Trainees) - 1977	287	127.43	0.33	5.67	0.24	4.45	110.3	146.6	36.3	.732	
	Women - 1977	1331	118.30	0.15	5.63	0.11	4.76	98.9	135.9	37.0	.726	
8	Substernale Height											
	Men (Trainees) - 1977	287	122.57	0.32	5.49	0.23	4.48	103.8	140.2	36.4	.704	
	Women - 1977	255	113.92	0.31	4.97	0.22	4.36	101.5	130.5	29.0	.699	
9	Elbow (Radiale) Height											
	Men (Trainees) - 1977	287	109.40	0.30	5.05	0.21	4.62	94.5	126.4	31.9	.628	
	Women - 1977	255	102.56	0.30	4.80	0.21	4.68	90.0	118.8	28.8	.629	
10	Knuckle Height (Metacarpale III)											
	Men (Trainees) - 1977	287	75.51	0.24	4.11	0.17	5.45	62.4	89.5	27.1	.434	
	Women - 1977	255	70.99	0.25	3.97	0.18	5.59	58.8	83.5	24.7	.436	
11	Waist Height											
	Men - 1946	24,469	105.55	0.03	4.97	0.02	4.71	83.0	127.0	44.0	.607	
	Men - 1966	6682	106.33	0.07	5.37	0.05	5.05	86.2	126.2	40.0	.609	
	Men (Trainees) - 1966	2639	106.65	0.10	5.14	0.07	4.82	88.2	125.2	37.0	.611	
	Men (Trainees) - 1977	287	105.47	0.31	5.27	0.22	4.99	89.5	119.9	30.4	.606	
	Women - 1946	8121	102.46	0.05	4.57	0.04	4.48	87.0	122.0	35.0	.632	
	Women - 1977	1331	101.39	0.14	5.20	0.10	5.13	84.8	120.8	36.0	.622	

TABLE 25b. PERCENTILE VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	Percentiles in Centimeters										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		99th
STANDING MEASUREMENTS (continued)													
5	Axilla Height												
	Men (Trainees) - 1977			121.5	123.9	127.5	131.3	135.1	138.7	140.9			
	Women - 1977	110.8	112.2	114.3	116.2	119.4	123.1	127.1	130.7	132.8	134.9	136.2	25.4
6	Suprasternale Height												
	Men (Trainees) - 1977			132.6	135.0	138.8	142.7	146.7	150.4	152.7			
	Women - 1977	120.7	121.6	123.4	125.3	128.8	132.6	136.3	139.7	142.0	144.9	147.2	26.5
7	Chest/Bustpoint Height												
	Men (Trainees) - 1977			117.9	120.1	123.7	127.5	131.2	134.5	136.5			
	Women - 1977	106.0	107.3	109.3	111.1	114.4	118.2	122.1	125.7	127.8	130.1	131.5	25.5
8	Substernale Height												
	Men (Trainees) - 1977			113.4	115.7	119.1	122.6	126.2	129.5	131.5			
	Women - 1977	103.4	104.2	105.8	107.5	110.6	113.9	117.2	120.2	122.2	124.9	127.0	23.6
9	Elbow (Radiale) Height												
	Men (Trainees) - 1977			101.0	103.0	106.1	109.4	112.7	115.8	117.8			
	Women - 1977	92.9	93.6	94.9	96.4	99.1	102.4	105.8	108.9	110.7	112.7	114.1	21.2
10	Knuckle Height (Metacarpale III)												
	Men (Trainees) - 1977			68.8	70.3	72.8	75.5	78.2	80.7	82.2			
	Women - 1977	61.9	63.0	64.6	66.0	68.3	70.9	73.7	76.1	77.5	78.8	79.5	17.6
11	Waist Height												
	Men - 1946			97.3	99.1	102.1	105.4	109.0	111.8	113.8	116.1	117.6	23.4
	Men - 1966	94.2	95.2	97.5	99.5	102.8	106.4	109.9	113.1	115.2	117.5	119.2	25.6
	Men (Trainees) - 1966	93.6	95.1	98.2	100.0	103.2	106.7	110.1	113.2	115.2	117.5	119.2	24.2
	Men (Trainees) - 1977	95.0	96.2	96.6	98.8	102.0	105.4	109.0	112.3	114.2			
	Women - 1946			95.1	96.7	99.4	102.4	105.4	108.3	110.1	112.3	113.9	21.7
	Women - 1977	92.2	93.3	95.1	96.7	99.4	102.4	104.8	108.2	110.3	112.7	114.2	24.5

TABLE 25a. STATISTICAL VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	N	Values in Centimeters						Stature ratio	
			Mean	SE(M)	S.D.	SE(SD)	V(%)	Min.		Max.
STANDING MEASUREMENTS (continued)										
12	Crotch Height									
	Men - 1946	24,497	83.42	0.03	4.45	0.02	5.33	65.0	101.0	36.0
	Men - 1966	6682	83.94	0.06	4.67	0.04	5.57	64.8	101.7	36.9
	Men (Trainees) - 1966	2639	84.41	0.09	4.57	0.06	5.41	65.8	100.7	34.9
	Women - 1946	8113	72.83	0.04	4.03	0.03	5.57	58.0	89.0	31.0
	Women - 1977	1331	76.37	0.12	4.38	0.08	5.73	62.4	92.0	29.6
13	Hip (Trochanteric) Height									
	Women - 1946	8120	81.70	0.05	4.29	0.03	5.28	67.0	100.0	33.0
	Women - 1977	255	85.91	0.28	4.43	0.20	5.15	76.0	101.9	25.9
14	Buttock Height									
	Men (Trainees) - 1977	287	89.41	0.30	5.07	0.21	5.67	75.5	105.4	29.9
	Women - 1977	1331	83.80	0.13	4.67	0.09	5.57	70.4	103.3	32.9
15	Gluteal Furrow Height									
	Men (Trainees) - 1977	287	80.37	0.26	4.42	0.18	5.50	66.1	94.6	28.5
	Women - 1977	255	74.13	0.25	4.06	0.18	5.48	62.3	87.9	25.6
16	Kneecap (Patella) Height									
	Men - 1966	6682	52.86	0.04	3.25	0.03	6.14	42.8	64.2	21.4
	Men (Trainees) - 1966	2639	53.00	0.06	3.14	0.04	5.93	42.8	64.2	21.4
	Women - 1977	1331	47.90	0.07	2.65	0.05	5.53	39.4	58.1	18.7
17	Tibiale Height									
	Men - 1946	24,664	45.56	0.02	2.85	0.01	6.26	35.5	59.5	24.0
	Men (Trainees) - 1977	283	48.31	0.16	2.77	0.12	5.73	40.4	55.8	15.4
	Women - 1977	255	44.05	0.15	2.47	0.11	5.61	37.0	51.8	14.8

TABLE 25b. PERCENTILE VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	Percentiles in Centimeters										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		99th
STANDING MEASUREMENTS (continued)													
12	Crotch Height												
	Men - 1946	73.2	74.4	76.2	77.7	80.5	83.3	86.4	89.2	90.9	93.0	94.5	21.3
	Men - 1966	72.8	74.2	76.3	78.0	80.8	83.9	87.0	89.9	91.7	93.7	95.1	22.3
	Men (Trainees) - 1966	73.7	75.0	77.0	78.7	81.4	84.4	87.4	90.3	92.0	94.0	95.4	21.7
	Women - 1946	63.2	64.5	66.2	67.7	70.1	72.8	75.5	78.0	79.6	81.4	82.7	19.5
	Women - 1977	66.8	67.9	69.5	70.9	73.3	76.1	79.3	82.2	83.9	85.7	86.8	20.0
13	Hip (Trochanteric) Height												
	Women - 1946	72.1	73.2	74.8	76.3	78.8	81.6	84.5	87.2	88.9	91.0	92.3	20.2
	Women - 1977	77.1	77.6	78.7	80.1	82.7	85.8	88.9	91.5	93.2	95.1	96.6	19.5
14	Buttock Height												
	Men (Trainees) - 1977	74.0	74.8	80.8	82.8	86.1	89.5	92.8	95.7	97.6	94.1	95.9	21.9
	Women - 1977			76.4	77.9	80.5	83.6	86.8	89.8	91.8			
15	Gluteal Furrow Height												
	Men (Trainees) - 1977	65.6	66.5	73.3	74.8	77.3	80.3	83.2	86.0	87.7	83.1	84.6	19.0
	Women - 1977			67.9	69.2	71.4	73.9	76.6	79.3	81.0			
16	Kneecap (Patella) Height												
	Men - 1966	45.5	46.4	47.6	48.7	50.6	52.8	55.0	57.1	58.4	59.8	60.7	15.2
	Men (Trainees) - 1966	45.9	46.7	47.9	49.0	50.8	53.0	55.1	57.1	58.2	59.6	60.5	14.6
	Women - 1977	42.1	42.8	43.8	44.6	46.0	47.8	49.7	51.5	52.5	53.6	54.2	12.1
17	Tibiale Height												
	Men - 1946	39.1	39.9	41.1	41.9	43.7	45.5	47.5	49.3	50.5	51.8	52.8	13.7
	Men (Trainees) - 1977			43.5	44.8	46.6	48.4	50.2	51.8	52.8			
	Women - 1977	38.6	39.1	40.0	40.9	42.4	44.0	45.6	47.2	48.2	49.6	50.6	12.0

TABLE 25a. STATISTICAL VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	N	Mean	SE(M)	Values in Centimeters					V(%)	Range		Stature ratio
					S.D.	SE(SD)	Min.	Max.	Total				
STANDING MEASUREMENTS (continued)													
18	Calf Height												
	Men - 1966	6682	35.42	0.03	2.70	0.02	23.8	47.7	23.9	7.62			.203
	Men (Trainees) - 1966	2639	35.45	0.05	2.53	0.03	23.8	44.7	20.9	7.14			.203
	Women - 1977	1331	32.55	0.06	2.30	0.04	25.3	40.4	15.1	7.07			.200
19	Acromion-Radiale Length												
	Men - 1946	24,348	33.35	0.01	1.90	0.00	23.5	40.5	17.0	5.70			.191
	Men (Trainees) - 1977	287	33.74	0.11	1.82	0.08	27.9	39.3	11.4	5.40			.194
	Women - 1977	255	30.85	0.10	1.67	0.07	26.6	37.2	10.6	5.41			.189
20	Radiale-Styilion Length												
	Men (Trainees) - 1977	287	26.84	0.09	1.57	0.07	21.6	31.5	9.9	5.87			.154
	Women - 1977	255	24.37	0.09	1.47	0.07	21.0	29.9	8.9	6.02			.150
SITTING MEASUREMENTS													
21	Sitting Height												
	Men - 1946	24,352	90.88	0.02	3.41	0.01	77.0	105.0	28.0	3.75			.523
	Men - 1966	6682	90.69	0.04	3.66	0.03	77.2	103.2	26.0	4.04			.520
	Men (Trainees) - 1966	2639	91.22	0.07	3.44	0.05	79.2	103.2	24.0	3.77			.522
	Men (Trainees) - 1977	287	89.34	0.21	3.63	0.15	78.1	100.2	22.1	4.07			.513
	Women - 1946	8119	83.66	0.04	3.19	0.03	71.0	97.0	26.0	3.83			.516
	Women - 1977	1331	85.08	0.10	3.59	0.07	73.1	96.2	23.1	4.22			.522
22	Eye Height, Sitting												
	Men - 1966	6682	78.72	0.04	3.57	0.03	65.8	92.7	26.9	4.53			.451
	Men (Trainees) - 1966	2639	79.12	0.07	3.39	0.05	66.8	90.7	23.9	4.29			.453
	Men (Trainees) - 1977	287	71.42	0.20	3.39	0.14	66.8	86.7	19.9	4.38			.445
	Women - 1977	1331	73.64	0.09	3.46	0.07	62.5	84.1	21.6	4.71			.452

TABLE 25b. PERCENTILE VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	Percentiles in Centimeters										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		99th
STANDING MEASUREMENTS (continued)													
18	Calf Height												
	Men - 1966	29.3	30.0	31.1	32.0	33.6	35.4	37.2	38.9	40.0	41.2	41.9	12.6
	Men (Trainees) - 1966	30.0	30.6	31.5	32.3	33.7	35.4	37.1	38.8	39.8	40.9	41.7	11.7
	Women - 1977	27.8	28.2	29.0	29.7	30.9	32.4	34.1	35.6	36.6	37.6	38.3	10.5
19	Acromion-Radiale Length												
	Men - 1946	29.0	29.5	30.2	30.7	32.0	33.3	34.5	35.8	36.6	37.3	37.8	8.8
	Men (Trainees) - 1977			30.8	31.4	32.5	33.7	35.0	36.1	36.8			
	Women - 1977	27.3	27.5	28.1	28.7	29.8	30.9	31.9	32.8	33.4	34.3	35.1	7.8
20	Radiale-Stylelion Length												
	Men (Trainees) - 1977	21.2	21.6	22.1	22.6	23.3	24.2	25.3	26.4	27.0	27.6	27.9	6.7
SITTING MEASUREMENTS													
21	Sitting Height												
	Men - 1946	82.6	83.6	85.1	86.4	88.4	90.9	93.2	95.2	96.5	98.0	99.1	16.5
	Men - 1966	82.0	83.0	84.5	85.9	88.2	90.8	93.2	95.4	96.7	98.2	99.2	17.2
	Men (Trainees) - 1966	82.8	83.9	85.5	86.8	88.9	91.2	93.5	95.6	96.9	98.4	99.4	16.6
	Men (Trainees) - 1977			83.5	84.9	87.0	89.3	91.7	94.0	95.4			
	Women - 1946	76.2	77.1	78.4	79.6	81.5	83.7	85.8	87.8	88.9	90.2	91.1	14.9
	Women - 1977	76.3	77.4	79.0	80.4	82.7	85.2	87.6	89.7	90.8	92.0	92.7	16.4
22	Eye Height, Sitting												
	Men - 1966	70.1	71.2	72.8	74.1	76.4	78.8	81.2	83.3	84.6	86.1	87.0	16.9
	Men (Trainees) - 1966	71.2	72.1	73.4	74.7	76.8	79.2	81.4	83.5	84.7	86.2	87.2	16.0
	Men (Trainees) - 1977			72.0	73.3	75.3	77.3	79.6	81.8	83.2			
	Women - 1977	65.3	66.2	67.7	69.1	71.4	73.8	76.0	77.9	79.1	80.6	81.6	16.3

TABLE 25a. STATISTICAL VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	N	Mean	Values in Centimeters					Range		Stature ratio	
				SE(M)	S.D.	SE(SD)	V(%)	Min.	Max.	Total		
SITTING MEASUREMENTS (continued)												
23	Mid-Shoulder Height, Sitting											
	Men - 1966	6682	62.38	0.04	3.13	0.03	5.09	50.8	73.2	22.4	.357	
	Men (Trainees) - 1966	2639	62.70	0.06	2.93	0.04	4.68	52.2	73.2	21.0	.359	
	Men (Trainees) - 1977	287	61.39	0.18	3.03	0.13	4.93	52.8	69.2	16.4	.353	
24	Trunk Height, Sitting											
	Men - 1946	24,715	58.44	0.02	2.96	0.01	5.06	45.0	69.0	24.0	.336	
	Women - 1946	8119	53.62	0.03	2.72	0.02	5.11	43.0	63.0	20.0	.331	
25	Shoulder-Elbow Length											
	Men - 1946	24,556	36.28	0.01	2.06	0.00	5.68	25.0	49.0	24.0	.209	
	Men - 1966	6682	36.87	0.02	1.86	0.02	5.05	29.6	43.7	14.1	.211	
	Men (Trainees) - 1966	2639	36.78	0.04	1.81	0.02	4.92	30.8	43.4	12.6	.211	
	Men (Trainees) - 1977	287	36.32	0.11	1.85	0.08	5.10	31.2	41.8	10.6	.209	
	Women - 1946	8119	33.20	0.02	1.84	0.01	5.62	25.0	41.0	16.0	.205	
	Women - 1977	1331	33.56	0.05	1.75	0.03	5.21	27.3	40.2	12.9	.206	
26	Elbow-Grip Length											
	Men (Trainees) - 1977	287	34.97	0.12	1.96	0.08	5.61	28.3	40.8	12.5	.201	
	Women - 1977	255	32.25	0.11	1.76	0.08	5.46	27.7	37.7	10.0	.198	
27	Elbow-Fingertip Length											
	Men - 1946	24,354	47.58	0.01	2.23	0.00	4.69	37.5	59.5	22.0	.274	
	Men - 1966	6682	47.96	0.03	2.31	0.02	4.81	39.2	57.6	18.4	.275	
	Men (Trainees) - 1966	2639	47.94	0.04	2.19	0.03	4.57	40.4	56.4	16.0	.274	
	Men (Trainees) - 1977	287	47.77	0.15	2.47	0.10	5.17	40.0	54.6	14.6	.274	
	Women - 1946	8118	42.36	0.02	2.09	0.02	4.98	33.0	52.0	19.0	.261	
	Women - 1977	1331	43.52	0.06	2.28	0.04	5.25	37.1	51.0	13.9	.267	

TABLE 25b. PERCENTILE VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	Percentiles in Centimeters										Range (1st-99th)
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th	
SITTING MEASUREMENTS (continued)												
23	Mid-Shoulder Height, Sitting											
	Men - 1966	54.5	55.6	57.1	58.4	60.3	62.4	64.5	66.5	67.6	68.9	15.2
	Men (Trainees) - 1966	55.8	56.7	58.0	59.0	60.7	62.7	64.6	66.5	67.6	68.9	13.9
	Men (Trainees) - 1977			56.0	57.7	59.4	61.3	63.4	65.4	66.6		
24	Trunk Height, Sitting											
	Men - 1946	51.1	51.8	53.3	54.4	56.4	58.4	60.5	62.2	63.5	64.8	14.4
	Women - 1946	47.4	48.1	49.2	50.2	51.7	53.6	55.5	57.2	58.2	59.2	12.5
25	Shoulder-Elbow Length											
	Men - 1946	31.2	31.8	32.8	33.5	34.8	36.3	37.6	38.9	39.6	40.6	10.2
	Men - 1966	32.6	33.1	33.8	34.5	35.6	36.8	38.1	39.3	40.0	40.8	8.7
	Men (Trainees) - 1966	32.7	33.1	33.8	34.4	35.6	36.8	38.0	39.1	39.8	40.6	8.5
	Men (Trainees) - 1977			33.3	34.0	35.1	36.3	37.5	38.7	38.5		
	Women - 1946	28.8	29.3	30.2	30.9	32.0	33.2	34.4	35.5	36.2	37.1	8.8
	Women - 1977	29.8	30.2	30.8	31.4	32.3	33.5	34.7	35.9	36.6	37.2	7.8
26	Elbow-Grip Length											
	Men (Trainees) - 1977	28.4	28.9	31.7	32.5	33.7	35.0	36.2	37.5	38.3	36.3	8.4
	Women - 1977			29.6	30.1	31.0	32.1	33.4	34.6	35.4		
27	Elbow-Fingertip Length											
	Men - 1946	42.2	42.9	43.9	44.7	46.0	47.5	49.0	50.3	51.1	52.1	10.6
	Men - 1966	42.7	43.4	44.3	45.1	46.4	47.9	49.4	51.0	51.9	53.0	11.1
	Men (Trainees) - 1966	42.8	43.4	44.4	45.2	46.5	47.9	49.4	50.7	51.6	52.6	10.5
	Men (Trainees) - 1977			43.8	44.8	46.2	47.7	49.4	51.0	52.0		
	Women - 1946	37.3	37.9	38.9	39.7	41.0	42.4	43.7	44.9	45.7	46.7	10.1
	Women - 1977	38.7	39.2	40.0	40.7	41.9	43.4	45.0	46.6	47.5	48.5	10.5

TABLE 25a. STATISTICAL VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	N	Mean	SE(M)	Values in Centimeters					Stature ratio
					S.D.	SE(SD)	V(%)	Min.	Max.	
SITTING MEASUREMENTS (continued)										
28	Knee Height, Sitting									
	Men - 1946	24,419	54.91	0.02	2.76	0.01	5.03	39.0	69.0	.316
	Men - 1966	6682	54.06	0.03	2.73	0.02	5.05	44.2	64.7	.310
	Men (Trainees) - 1966	2639	54.02	0.05	2.63	0.04	4.87	46.2	64.2	.309
	Men (Trainees) - 1977	287	55.10	0.18	3.02	0.13	5.49	46.5	63.2	.317
	Women - 1946	8117	47.67	0.03	2.39	0.02	5.07	38.0	57.0	.294
	Women - 1977	1331	50.99	0.07	2.60	0.05	5.11	43.4	60.7	.313
29	Popliteal Height, Sitting									
	Men - 1966	6682	44.61	0.03	2.50	0.02	5.60	35.8	54.5	.256
	Men (Trainees) - 1966	2639	44.78	0.05	2.49	0.03	5.56	36.6	53.3	.256
	Men (Trainees) - 1977	287	44.27	0.16	2.72	0.11	6.14	37.0	52.0	.254
	Women - 1977	1331	41.68	0.06	2.35	0.05	5.64	34.7	49.1	.256
30	Buttock-Knee Length									
	Men - 1946	24,244	59.43	0.02	2.85	0.01	4.80	49.0	71.0	.342
	Men - 1966	6682	59.47	0.03	2.85	0.02	4.80	49.8	71.2	.341
	Men (Trainees) - 1966	2639	59.24	0.05	2.77	0.04	4.68	50.2	70.2	.339
	Men (Trainees) - 1977	287	60.78	0.18	3.07	0.13	5.06	52.4	70.3	.349
	Women - 1946	8117	56.81	0.03	2.95	0.02	5.23	45.0	67.0	.350
	Women - 1977	1331	57.85	0.08	3.06	0.06	5.29	48.7	68.5	.355
31	Buttock-Popliteal Length									
	Men - 1966	6682	49.82	0.03	2.50	0.02	5.02	41.2	58.7	.285
	Men (Trainees) - 1966	2639	49.51	0.05	2.52	0.03	5.09	42.0	58.7	.283

TABLE 25b. PERCENTILE VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	Percentiles in Centimeters										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		99th
SITTING MEASUREMENTS (continued)													
28	Knee Height, Sitting												
	Men - 1946	48.3	49.0	50.3	51.3	53.1	54.9	56.9	58.7	59.7	61.0	61.7	13.4
	Men - 1966	47.7	48.5	49.7	50.7	52.2	54.0	55.9	57.6	58.7	59.9	60.6	12.9
	Men (Trainees) - 1966	48.0	48.8	49.8	50.8	52.2	53.9	55.8	57.5	58.6	59.7	60.4	12.4
	Men (Trainees) - 1977			50.2	51.4	53.2	55.1	57.1	59.0	60.2			
	Women - 1946	42.2	42.7	43.7	44.6	46.1	47.7	49.2	50.7	51.6	52.8	53.6	11.4
	Women - 1977	45.5	46.0	46.9	47.7	49.2	50.9	52.7	54.4	55.5	56.6	57.3	11.8
29	Popliteal Height, Sitting												
	Men - 1966	38.8	39.6	40.6	41.5	42.9	44.5	46.3	47.9	48.8	49.8	50.4	11.6
	Men (Trainees) - 1966	39.1	39.8	40.7	41.6	43.0	44.7	46.5	48.0	49.0	50.0	50.6	11.5
	Men (Trainees) - 1977			39.7	40.8	42.5	44.3	46.1	47.7	48.7			
	Women - 1977	36.4	37.0	38.0	38.8	40.1	41.6	43.2	44.8	45.7	46.7	47.3	10.9
30	Buttock-Knee Length												
	Men - 1946	52.6	53.3	54.6	55.6	57.4	59.4	61.5	63.0	64.0	65.3	66.0	13.4
	Men - 1966	52.9	53.7	54.9	55.9	57.5	59.4	61.3	63.2	64.3	65.6	66.5	13.6
	Men (Trainees) - 1966	53.2	53.8	54.8	55.7	57.3	59.2	61.1	62.8	63.9	65.3	66.2	13.0
	Men (Trainees) - 1977			55.7	56.8	58.7	60.8	62.9	64.8	65.8			
	Women - 1946	50.0	50.8	52.0	53.1	54.8	56.8	58.7	60.6	61.7	63.2	64.3	14.3
	Women - 1977	51.1	51.9	53.1	54.0	55.7	57.7	59.9	62.0	63.2	64.5	65.3	14.2
31	Buttock-Popliteal Length												
	Men - 1966	44.0	44.7	45.8	46.6	48.1	49.8	51.5	53.1	54.0	55.1	55.8	11.8
	Men (Trainees) - 1966	43.7	44.4	45.4	46.3	47.8	49.5	51.2	52.8	53.7	54.9	55.6	11.9

TABLE 25a. STATISTICAL VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	N	Values in Centimeters						Range		Stature ratio
			Mean	SE(M)	S.D.	SE(SD)	V(%)	Min.	Max.	Total	
DEPTH AND BREADTH MEASUREMENTS											
32	Chest Depth										
	Men - 1946	24,558	21.16	0.01	1.90	0.00	8.98	13.5	32.5	19.0	.122
	Men - 1966	6682	23.18	0.02	1.99	0.02	8.61	16.4	34.0	17.6	.133
	Men (Trainees) - 1966	2639	22.76	0.04	1.88	0.03	8.24	16.8	30.0	13.2	.130
	Men (Trainees) - 1977	287	21.68	0.12	2.00	0.08	9.21	17.5	27.2	9.7	.125
	Women - 1946 ^a	8118	18.08	0.02	1.60	0.01	9.10	13.0	29.0	16.0	.112
	Women - 1977 ^b	1331	22.92	0.06	2.23	0.04	9.71	15.5	33.2	27.7	.141
33	Trunk/Waist Depth										
	Men - 1946 ^c	24,588	23.08	0.01	2.06	0.00	8.92	16.5	35.5	19.0	.133
	Men (Trainees) - 1977 ^d	280	20.29	0.13	2.25	0.10	11.11	16.0	28.8	12.8	.117
	Women - 1946 ^c	8114	19.23	0.03	2.38	0.02	12.69	12.0	34.0	22.0	.119
	Women - 1977 ^d	1331	18.29	0.06	2.21	0.04	12.09	13.4	32.7	19.3	.112
34	Shoulder (Bideloid) Breadth										
	Men - 1946	24,461	45.59	0.01	2.51	0.00	5.50	35.0	59.0	24.0	.262
	Men - 1966	6682	45.37	0.03	2.54	0.02	5.59	36.2	58.7	22.5	.260
	Men (Trainees) - 1966	2639	45.08	0.05	2.47	0.03	5.48	36.2	54.2	18.0	.258
	Women - 1946	8120	39.58	0.03	2.56	0.02	6.54	31.0	56.0	25.0	.244
	Women - 1977	1331	42.05	0.06	2.24	0.04	5.32	36.3	56.1	19.8	.258
35	Biacromial Breadth										
	Men (Trainees) - 1977	287	39.46	0.12	1.98	0.08	5.02	33.6	44.9	11.3	.227
	Women - 1977	255	35.71	0.10	1.61	0.07	4.51	30.6	39.6	9.0	.219

^aChest Depth above Bust^bBust Depth at Bust^cTrunk Depth^dWaist Depth

TABLE 25b. PERCENTILE VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	Percentiles in Centimeters										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		99th
DEPTH AND BREADTH MEASUREMENTS													
32	Chest Depth												
	Men - 1946	17.3	17.5	18.3	18.8	19.8	21.1	22.4	23.6	24.4	25.7	26.7	9.4
	Men - 1966	19.2	19.6	20.2	20.8	21.8	23.0	24.4	25.8	26.7	27.9	28.8	9.6
	Men (Trainees) - 1966	18.9	19.3	19.9	20.5	21.4	22.6	23.9	25.2	26.1	27.1	27.9	9.0
	Men (Trainees) - 1977			18.9	19.4	20.2	21.4	23.0	24.6	25.5			
	Women - 1946 ^a	14.8	15.1	15.6	16.1	17.0	18.0	19.1	20.2	20.9	21.8	22.4	7.6
	Women - 1977 ^b	18.6	19.0	19.6	20.2	21.4	22.7	24.3	25.8	26.8	28.1	29.1	10.5
33	Trunk/Waist Depth												
	Men - 1946 ^c	19.0	19.3	20.1	20.6	21.6	22.9	24.1	25.7	26.7	28.2	29.2	10.2
	Men (Trainees) - 1977 ^d			17.5	17.9	18.6	19.8	21.6	23.5	24.8			
	Women - 1946 ^c	15.0	15.4	16.0	16.6	17.5	18.9	20.6	22.4	23.8	25.4	26.6	11.6
	Women - 1977 ^d	14.4	14.8	15.3	15.9	16.8	18.0	19.4	21.0	22.2	23.9	25.1	10.7
34	Shoulder (Bideloid) Breadth												
	Men - 1946	40.1	40.6	41.7	42.4	43.9	45.5	47.2	48.8	49.8	51.3	52.3	12.2
	Men - 1966	40.0	40.6	41.5	42.3	43.6	45.2	47.0	48.6	49.8	51.1	52.1	12.1
	Men (Trainees) - 1966	39.6	40.3	41.2	42.0	43.4	45.0	46.7	48.3	49.4	50.5	51.2	11.6
	Women - 1946	34.2	34.9	35.8	36.6	37.8	39.3	41.1	43.0	44.2	45.6	46.7	12.5
	Women - 1977	37.3	37.7	38.4	39.2	40.5	42.0	43.5	44.8	45.7	46.7	47.5	10.2
35	Biacromial Breadth												
	Men (Trainees) - 1977			36.1	36.9	38.1	39.5	40.9	42.0	42.6			
	Women - 1977	32.2	32.5	33.0	33.6	34.6	35.7	36.8	37.8	38.3	39.1	39.6	7.4

^aChest Depth above Bust^bBust Depth at Bust^cTrunk Depth^dWaist Depth

TABLE 25a. STATISTICAL VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	N	Values in Centimeters					Range		Stature ratio
			Mean	SE(M)	S.D.	SE(SD)	V(%)	Min.	Max.	
BREATH MEASUREMENTS (continued)										
36	Chest Breadth									
	Men - 1946	24,574	28.29	0.01	1.96	0.00	6.93	20.5	38.5	18.0
	Men - 1966	6682	30.57	0.03	2.15	0.02	7.02	24.4	41.6	17.2
	Men (Trainees) - 1966	2639	30.45	0.04	2.12	0.03	6.95	24.4	39.2	14.8
	Women - 1946	8118	28.43	0.03	2.38	0.02	8.52	20.0	42.0	22.0
	Women - 1977	1331	28.25	0.05	1.86	0.04	6.57	23.5	40.8	17.3
37	Hip Breadth, Standing									
	Men - 1966	6682	33.20	0.02	2.01	0.02	6.05	27.0	44.9	17.9
	Men (Trainees) - 1966	2639	33.05	0.04	1.98	0.03	6.00	27.2	44.8	17.6
	Women - 1977	1331	35.37	0.07	2.47	0.05	6.98	28.5	49.1	20.6
38	Forearm-Forearm Breadth									
	Men - 1946 ^a	24,590	44.54	0.02	3.90	0.01	8.76	34.5	61.5	27.0
	Men - 1966	6682	45.98	0.05	4.22	0.04	9.17	33.2	66.2	33.0
	Men (Trainees) - 1966	2639	45.17	0.08	4.08	0.06	9.03	33.2	64.2	31.0
	Women - 1946 ^a	8116	38.20	0.04	3.67	0.03	9.72	27.0	64.0	37.0
39	Hip Breadth, Sitting									
	Men - 1946	24,575	35.44	0.01	2.28	0.00	6.43	28.5	50.5	22.0
	Men - 1966	6682	34.16	0.03	2.38	0.02	6.97	26.2	50.2	24.0
	Men (Trainees) - 1966	2639	33.92	0.05	2.36	0.03	6.95	27.8	47.7	19.9
	Women - 1946	8120	36.92	0.03	2.83	0.02	7.76	27.0	50.0	23.0
	Women - 1977 ^b	255	38.27	0.20	3.27	0.14	8.54	30.1	47.8	17.7

^aElbow-Elbow Breadth^bThigh-to-Thigh Breadth, Sitting

TABLE 25b. PERCENTILE VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	Percentiles in Centimeters										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		99th
BREADTH MEASUREMENTS (continued)													
36	Chest Breadth												
	Men - 1946	23.6	24.4	25.4	25.9	26.9	28.2	29.5	30.7	31.5	32.5	33.5	9.9
	Men - 1966	26.1	26.6	27.3	28.0	29.1	30.4	31.9	33.4	34.4	35.5	36.4	10.3
	Men (Trainees) - 1966	26.0	26.5	27.2	27.8	29.0	30.3	31.8	33.2	34.1	35.3	36.1	10.1
	Women - 1946	23.6	24.1	24.8	25.6	26.8	28.2	29.8	31.5	32.6	34.1	35.2	11.6
	Women - 1977	24.5	24.8	25.4	26.0	27.0	28.2	29.4	30.6	31.4	32.4	33.2	8.7
37	Hip Breadth, Standing												
	Men - 1966	29.1	29.5	30.2	30.8	31.8	33.0	34.4	35.8	36.7	37.8	38.6	9.5
	Men (Trainees) - 1966	29.0	29.4	30.0	30.6	31.7	32.9	34.3	35.6	36.5	37.6	38.4	9.4
	Women - 1977	30.1	30.7	31.5	32.3	33.7	35.2	36.9	38.5	39.5	40.9	41.9	11.8
38	Forearm-Forearm Breadth												
	Men - 1946 ^a	36.6	37.3	38.9	39.9	41.9	44.2	46.7	49.5	51.6	53.6	55.4	18.8
	Men - 1966	37.9	38.6	39.8	40.9	43.0	45.6	48.6	51.6	53.6	55.9	57.6	19.7
	Men (Trainees) - 1966	37.3	38.1	39.2	40.3	42.2	44.8	47.8	50.7	52.6	54.6	55.8	18.5
	Women - 1946 ^a	31.2	32.0	33.0	34.0	35.6	37.7	40.3	43.1	44.9	47.1	48.6	17.4
39	Hip Breadth, Sitting												
	Men - 1946	31.0	31.5	32.3	32.8	34.0	35.3	36.8	38.4	39.4	41.1	42.4	11.4
	Men - 1966	29.5	30.0	30.7	31.4	32.5	33.9	35.6	37.3	38.4	39.8	40.7	11.2
	Men (Trainees) - 1966	29.2	29.7	30.4	31.1	32.2	33.7	35.4	37.1	38.2	39.4	40.1	10.9
	Women - 1946 ^b	31.1	31.7	32.7	33.5	35.0	36.7	38.6	40.6	42.0	43.6	44.9	13.8
	Women - 1977 ^b	31.6	32.1	33.0	34.0	36.0	38.2	40.4	42.5	43.9	45.7	47.1	15.5

^aElbow-Elbow Breadth^bThigh-to-Thigh Breadth, Sitting

TABLE 25a. STATISTICAL VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	Values in Centimeters							Stature ratio		
		N	Mean	SE(M)	S.D.	SE(SD)	V(%)	Range			
								Min.		Max.	
CIRCUMFERENCES											
40	Neck Circumference										
	Men - 1946	24,423	36.74	0.01	1.86	0.00	5.06	29.5	48.5	19.0	.211
	Men - 1966	6681	37.39	0.03	2.07	0.02	5.53	30.2	48.6	18.4	.214
	Men (Trainees) - 1966	2639	37.13	0.04	2.03	0.03	5.46	30.2	48.6	18.4	.213
	Women - 1946	8112	31.75	0.02	1.67	0.01	5.33	24.0	40.0	16.0	.196
	Women - 1977	1331	32.36	0.04	1.59	0.03	4.90	27.5	41.7	14.2	.199
41	Shoulder Circumference										
	Men - 1946	3409	109.87	0.11	6.38	0.08	5.81	90.0	137.9	47.9	.632
	Men - 1966	6682	113.16	0.08	6.39	0.06	5.64	92.8	145.2	52.4	.648
	Men (Trainees) - 1966	2639	112.30	0.12	6.35	0.09	5.66	92.8	139.2	46.4	.643
	Men (Trainees) - 1977	287	110.92	0.36	6.14	0.26	5.54	95.3	130.1	34.8	.637
	Women - 1977	1331	100.39	0.15	5.46	0.11	5.44	86.3	139.9	53.6	.616
42	Chest/Bust Circumference										
	Men - 1946	24,470	92.41	0.04	5.96	0.02	6.45	71.0	123.0	52.0	.531
	Men - 1966	6682	93.77	0.08	6.69	0.06	7.13	71.8	124.2	52.4	.537
	Men (Trainees) - 1966	2639	92.79	0.13	6.46	0.09	6.97	71.8	122.7	50.9	.531
	Men (Trainees) - 1977	287	92.90	0.39	6.60	0.28	7.11	78.7	111.2	32.5	.534
	Women - 1946	8115	88.91	0.09	7.68	0.06	8.68	68.0	128.0	60.0	.548
	Women - 1977	1331	88.21	0.18	6.43	0.12	7.28	68.9	128.4	59.5	.541
43	Chest Circumference below Bust										
	Women - 1946	8115	77.31	0.07	6.13	0.05	7.98	60.0	117.0	57.0	.477
	Women - 1977	1331	74.82	0.14	5.02	0.10	6.71	62.4	107.4	45.0	.459

TABLE 25b. PERCENTILE VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	Percentiles in Centimeters										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		99th
CIRCUMFERENCES													
40	Neck Circumference												
	Men - 1946	32.5	33.0	33.8	34.3	35.3	36.6	37.8	39.1	39.9	40.9	41.7	9.2
	Men - 1966	33.0	33.5	34.2	34.8	35.9	37.3	38.7	40.1	41.0	42.0	42.6	9.6
	Men (Trainees) - 1966	32.6	33.2	34.0	34.6	35.7	37.0	38.4	39.8	40.6	41.5	42.1	9.5
	Women - 1946	28.2	28.6	29.2	29.7	30.6	31.6	32.8	33.9	34.7	35.6	36.4	8.2
	Women - 1977	29.1	29.4	29.9	30.4	31.3	32.3	33.4	34.4	35.0	35.8	36.3	7.2
41	Shoulder Circumference												
	Men - 1946	96.5	97.5	99.6	101.6	104.6	108.2	112.0	115.8	118.4	121.2	123.2	26.7
	Men - 1966	99.8	101.2	103.3	105.3	108.8	112.8	117.1	121.4	124.2	127.7	130.2	30.4
	Men (Trainees) - 1966	98.9	100.4	102.5	104.4	107.8	111.9	116.4	120.8	123.5	126.6	128.7	29.8
	Men (Trainees) - 1977			101.4	103.2	106.5	110.6	115.0	119.1	121.5			
	Women - 1977	89.4	90.3	91.9	93.6	96.7	100.2	103.8	107.2	109.4	112.2	114.3	24.9
42	Chest/Bust Circumference												
	Men - 1946	80.3	81.5	83.6	85.3	88.4	91.9	96.0	100.1	102.9	106.4	109.2	28.9
	Men - 1966	80.9	82.2	84.1	85.9	89.1	93.0	97.7	102.6	105.9	109.9	112.8	31.9
	Men (Trainees) - 1966	80.0	81.3	83.2	85.0	88.2	92.2	96.7	101.4	104.5	108.2	110.8	30.8
	Men (Trainees) - 1977			83.8	85.2	87.9	91.9	97.0	102.4	105.6			
	Women - 1946	74.6	76.1	78.2	80.0	83.4	87.9	93.4	99.4	103.3	107.8	110.9	36.3
	Women - 1977	76.2	76.8	78.4	80.2	83.7	87.9	92.1	96.2	99.0	102.8	105.8	29.6
43	Chest Circumference below Bust												
	Women - 1946	65.9	67.0	68.6	70.2	73.0	76.5	80.8	85.5	88.7	92.7	95.6	29.7
	Women - 1977	66.0	66.3	67.4	68.7	71.3	74.5	77.8	81.0	83.4	86.6	89.2	23.2

TABLE 25a. STATISTICAL VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	N	Mean	SE(M)	S.D.	SE(SD)	V(%)	Range		Stature ratio
								Min.	Max.	
Values in Centimeters										
CIRCUMFERENCES (continued)										
44	Waist Circumference									
	Men - 1946	24,472	77.73	0.04	7.01	0.03	9.02	59.0	119.0	60.0
	Men - 1966	6682	80.29	0.10	8.18	0.07	10.19	58.8	127.7	68.9
	Men (Trainees) - 1966	2639	79.59	0.16	8.08	0.11	10.15	58.8	117.2	58.4
	Men (Trainees) - 1977	287	78.87	0.49	8.29	0.35	10.52	63.4	108.2	44.8
	Women - 1946	8115	67.00	0.07	6.24	0.05	9.38	52.0	110.0	58.0
	Women - 1977	1331	71.01	0.19	6.90	0.13	9.71	56.5	117.5	61.0
										.447
										.460
										.456
										.453
										.413
										.436
45	Hip (Buttock) Circumference									
	Men - 1946	24,500	93.14	0.04	5.70	0.02	6.12	67.0	127.0	60.0
	Men - 1966	6682	94.21	0.08	6.25	0.05	6.63	77.2	134.2	57.0
	Men (Trainees) - 1966	2639	93.45	0.12	6.37	0.09	6.81	77.2	125.2	48.0
	Men (Trainees) - 1977	287	95.14	0.36	6.04	0.25	6.35	83.8	113.8	30.0
	Women - 1946	8113	95.09	0.07	6.70	0.05	7.08	74.0	126.0	52.0
	Women - 1977	1331	95.52	0.18	6.39	0.12	6.69	77.4	134.6	57.2
										.536
										.540
										.535
										.547
										.586
										.586
46	Vertical Trunk Circum., Standing									
	Men - 1966	6682	164.11	0.10	8.49	0.07	5.17	135.2	199.7	64.5
	Men (Trainees) - 1966	2639	164.69	0.16	8.47	0.12	5.14	136.8	196.7	59.9
	Women - 1946	7771	149.71	0.08	7.16	0.06	4.80	125.0	185.0	60.0
	Women - 1977	1331	153.84	0.20	7.27	0.14	4.72	130.3	186.2	55.9
										.943
										.923
										.944
LIMB CIRCUMFERENCES										
57	Scye Circumference									
	Men - 1946	24,383	43.40	0.02	2.98	0.01	6.87	35.2	56.2	21.0
	Men - 1966	6682	44.56	0.04	3.26	0.03	7.32	32.2	60.2	28.0
	Men (Trainees) - 1966	2639	44.40	0.06	3.11	0.04	7.00	34.2	58.2	24.0
	Women - 1946	8119	37.92	0.03	3.14	0.02	8.38	23.0	51.0	28.0
	Women - 1977	1331	37.52	0.07	2.42	0.05	6.46	30.3	51.3	21.0
										.250
										.255
										.254
										.239
										.230

TABLE 25b. PERCENTILE VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	Percentiles in Centimeters										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		99th
CIRCUMFERENCES (continued)													
44	Waist Circumference												
	Men - 1946	65.0	66.3	68.3	69.8	72.9	76.7	81.3	86.6	90.9	95.8	99.3	34.3
	Men - 1966	66.3	67.7	69.7	71.3	74.5	78.9	84.7	91.4	95.9	101.6	105.6	39.3
	Men (Trainees) - 1966	65.5	67.3	69.4	70.9	73.7	78.0	84.2	91.0	95.5	100.5	103.6	38.1
	Men (Trainees) - 1977			68.4	70.4	73.4	76.5	83.1	91.5	95.6			
	Women - 1946	56.2	57.2	58.8	60.1	62.6	66.0	70.4	75.4	79.0	83.4	86.5	30.3
	Women - 1977	59.0	60.0	61.7	63.4	66.3	70.0	74.6	79.8	83.5	88.5	92.4	33.4
45	Hip (Buttock) Circumference												
	Men - 1946	80.5	82.0	84.6	86.4	89.2	92.7	96.5	100.3	102.9	106.2	108.7	28.2
	Men - 1966	82.0	83.3	85.1	86.8	89.8	93.6	97.9	102.5	105.5	109.3	112.0	30.0
	Men (Trainees) - 1966	81.0	82.4	84.3	85.9	88.9	92.7	97.4	102.2	105.2	108.7	110.9	29.9
	Men (Trainees) - 1977			87.3	88.3	90.5	94.1	98.8	103.8	106.9			
	Women - 1946	82.3	83.5	85.4	87.2	90.4	94.4	99.0	103.9	107.3	111.5	114.7	32.4
	Women - 1977	81.6	83.1	85.5	87.7	91.3	95.3	99.4	103.4	106.1	109.6	112.2	30.6
46	Vertical Trunk Circum., Standing												
	Men - 1966	145.4	147.5	150.6	153.5	158.3	163.8	169.5	175.1	178.6	182.9	185.9	40.5
	Men (Trainees) - 1966	145.0	147.4	151.0	154.0	159.0	164.5	170.1	175.5	179.0	183.1	186.2	41.2
	Women - 1946	134.4	136.1	138.6	140.9	144.8	149.3	154.2	159.0	162.2	166.1	169.0	34.6
	Women - 1977	136.5	138.9	142.2	144.9	149.1	153.7	158.2	163.2	166.1	169.5	171.8	35.3
LINE CIRCUMFERENCES													
47	Scye Circumference												
	Men - 1946	36.8	37.6	38.9	39.9	41.4	43.2	45.2	47.2	48.5	50.0	51.1	14.3
	Men - 1966	37.7	38.4	39.6	40.6	42.3	44.3	46.5	48.7	50.3	52.3	53.8	16.1
	Men (Trainees) - 1966	38.0	38.7	39.7	40.6	42.2	44.2	46.3	48.5	49.9	51.6	52.8	14.8
	Women - 1946	31.3	32.0	33.1	34.1	35.8	37.7	39.8	42.0	43.4	45.2	46.5	15.2
	Women - 1977	32.5	33.0	33.8	34.6	35.9	37.4	39.0	40.6	41.7	43.1	44.2	11.7

TABLE 25a. STATISTICAL VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	N	Mean	SE(M)	S.D.	SE(SD)	V(%)	Range		Stature ratio
								Min.	Max.	
LIMB CIRCUMFERENCES (continued)										
48	Biceps Circum., Relaxed									
	Men - 1946	24,446	28.06	0.01	2.36	0.00	8.41	20.2	39.2	.161
	Men - 1966	6682	29.44	0.03	2.74	0.02	9.29	20.8	44.2	.169
	Men (Trainees) - 1966	2639	29.01	0.05	2.77	0.04	9.53	20.8	38.7	.166
	Men (Trainees) - 1977	287	29.16	0.16	2.77	0.12	9.49	22.0	38.1	.168
	Women - 1946	8116	25.62	0.03	2.73	0.02	10.83	18.0	40.0	.158
	Women - 1977	255	25.89	0.16	2.56	0.11	9.89	20.2	34.4	.159
49	Biceps Circum., Flexed									
	Men - 1966	6682	32.37	0.03	2.75	0.02	8.52	22.8	45.2	.185
	Men (Trainees) - 1966	2639	31.81	0.05	2.75	0.04	8.63	22.8	43.7	.182
	Men (Trainees) - 1977	287	31.38	0.16	2.71	0.11	8.65	23.8	39.0	.180
	Women - 1977	1331	26.87	0.06	2.29	0.04	8.54	20.8	39.3	.165
50	Forearm Circum., Relaxed									
	Men - 1946	24,491	26.76	0.01	1.64	0.00	6.13	20.2	34.2	.154
	Women - 1946	8110	22.53	0.02	1.66	0.01	7.38	17.2	30.1	.139
	Women - 1977	255	23.28	0.09	1.50	0.07	6.43	20.4	28.7	.143
51	Forearm Circum., Flexed									
	Men - 1966	6682	29.43	0.03	2.15	0.02	7.31	22.6	41.4	.169
	Men (Trainees) - 1966	2639	29.22	0.04	2.04	0.03	6.99	22.6	37.4	.167
	Women - 1977	1331	24.63	0.04	1.53	0.03	6.23	20.2	33.0	.151
52	Wrist Circumference									
	Men - 1946	24,391	17.02	0.00	1.03	0.00	6.05	13.5	21.0	.098
	Men - 1966	6682	17.06	0.01	0.88	0.01	5.13	13.6	21.6	.098
	Men (Trainees) - 1966	2639	17.08	0.02	0.85	0.01	4.99	14.6	20.6	.098
	Women - 1946	8112	14.72	0.01	0.81	0.01	5.53	11.4	18.4	.091
	Women - 1977	1331	14.71	0.02	0.69	0.01	4.66	12.9	17.5	.090

TABLE 25b. PERCENTILE VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	Percentiles in Centimeters										Range (1st-99th)
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th	
LIMB CIRCUMFERENCES (continued)												
48	Biceps Circum., Relaxed											
	Men - 1946	23.1	23.6	24.3	25.1	26.4	27.9	29.5	31.2	32.3	33.5	34.3 11.2
	Men - 1966	23.9	24.4	25.3	26.1	27.5	29.2	31.2	33.1	34.2	35.6	36.6 12.7
	Men (Trainees) - 1966	23.4	24.0	24.9	25.6	27.0	28.8	30.8	32.8	34.0	35.2	36.0 12.6
	Men (Trainees) - 1977			24.8	25.6	27.2	29.0	31.1	32.9	33.9		
	Women - 1946	20.4	20.9	21.7	22.4	23.7	25.3	27.3	29.4	30.7	32.2	33.2 12.8
	Women - 1977	21.0	21.3	21.5	22.4	24.1	25.9	27.4	28.8	30.3	32.6	33.5 12.5
49	Biceps Circum., Flexed											
	Men - 1966	26.5	27.1	28.0	28.9	30.4	32.1	34.0	35.9	37.0	38.4	39.4 12.9
	Men (Trainees) - 1966	26.1	26.7	27.6	28.4	29.9	31.7	33.6	35.5	36.6	38.0	38.8 12.7
	Men (Trainees) - 1977			27.0	27.9	29.4	31.3	33.2	35.0	36.0		
	Women - 1977	21.9	22.4	23.2	24.0	25.3	26.8	28.3	29.7	30.7	32.0	33.0 11.1
50	Forearm Circum., Relaxed											
	Men - 1946	22.9	23.4	24.1	24.6	25.7	26.7	27.7	28.7	29.5	30.2	30.7 7.8
	Women - 1946	19.0	19.4	20.0	20.5	21.4	22.4	23.5	24.7	25.5	26.4	27.1 8.1
	Women - 1977	20.5	20.6	21.0	21.4	22.2	23.2	24.3	25.3	25.9	26.6	27.0 6.5
51	Forearm Circum., Flexed											
	Men - 1966	24.8	25.3	26.1	26.8	28.0	29.3	30.8	32.2	33.1	34.3	35.1 10.3
	Men (Trainees) - 1966	24.8	25.3	26.0	26.6	27.8	29.1	30.6	31.9	32.7	33.6	34.2 9.4
	Women - 1977	21.2	21.6	22.2	22.7	23.6	24.6	25.6	26.6	27.1	27.8	28.3 7.1
52	Wrist Circumference											
	Men - 1946	14.7	15.0	15.2	15.7	16.3	17.0	17.8	18.5	18.8	19.3	19.6 4.9
	Men - 1966	15.1	15.3	15.7	16.0	16.5	17.0	17.6	18.2	18.6	19.0	19.3 4.2
	Men (Trainees) - 1966	15.2	15.4	15.8	16.0	16.5	17.0	17.6	18.2	18.6	19.0	19.4 4.2
	Women - 1946	13.0	13.2	13.5	13.7	14.2	14.7	15.2	15.8	16.1	16.6	17.0 4.0
	Women - 1977	13.2	13.4	13.6	13.8	14.2	14.7	15.2	15.6	15.8	16.1	16.2 3.0

TABLE 25a. STATISTICAL VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	N	Mean	SE(M)	Values in Centimeters					Stature ratio
					S.D.	SE(SD)	V(%)	Min.	Max.	
LIMB CIRCUMFERENCES (continued)										
53	Upper Thigh Circumference									
	Men - 1946	24,832	54.45	0.03	4.32	0.02	7.93	41.2	70.2	29.0
	Men - 1966	6682	55.42	0.06	4.80	0.04	8.66	38.8	77.7	38.9
	Men (Trainees) - 1966	2639	54.57	0.10	4.95	0.07	9.06	40.8	75.7	34.9
	Women - 1946	7781	56.08	0.06	5.23	0.04	9.40	39.0	79.0	40.0
	Women - 1977	1331	56.92	0.13	4.59	0.09	8.07	43.1	79.9	36.8
54	Calf Circumference									
	Men - 1946	24,686	35.76	0.01	2.38	0.00	6.66	27.2	47.2	20.0
	Men - 1966	6682	36.60	0.03	2.67	0.02	7.29	28.2	50.7	22.5
	Men (Trainees) - 1966	2639	36.28	0.05	2.74	0.04	7.56	28.2	45.7	17.5
	Men (Trainees) - 1977	287	35.83	0.17	2.80	0.12	7.81	28.5	44.0	15.5
	Women - 1977	1331	35.09	0.07	2.51	0.05	7.15	27.9	47.6	19.7
55	Ankle Circumference									
	Men - 1966	6682	22.69	0.02	1.44	0.01	6.34	18.0	30.6	12.6
	Men (Trainees) - 1966	2639	22.71	0.03	1.43	0.02	6.29	18.0	27.9	9.9
	Men (Trainees) - 1977	287	21.71	0.08	1.42	0.06	6.56	18.0	26.0	8.0
	Women - 1977	1331	20.73	0.03	1.25	0.02	6.02	16.7	24.9	8.2
SURFACE MEASUREMENTS										
56	Shoulder Length									
	Men - 1946	24,463	15.37	0.01	1.70	0.00	11.06	10.2	21.2	11.0
	Men - 1966	6682	16.20	0.02	1.98	0.02	12.25	8.8	24.3	15.5
	Men (Trainees) - 1966	2639	15.78	0.04	1.87	0.03	11.83	9.6	22.7	13.1
	Women - 1946	8118	12.14	0.01	1.17	0.01	9.60	8.3	16.7	8.4
	Women - 1977	1331	15.00	0.03	1.06	0.02	7.08	11.8	18.7	6.9

TABLE 25b. PERCENTILE VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	Percentiles in Centimeters										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		99th
Limb Circumferences (continued)													
53	Upper Thigh Circumference												
	Men - 1946	45.5	46.2	47.8	49.0	51.3	54.1	57.2	60.2	62.2	64.5	66.0	20.5
	Men - 1966	45.5	46.5	48.1	49.5	52.0	55.1	58.5	61.8	63.9	66.1	67.6	22.1
	Men (Trainees) - 1966	44.8	45.8	47.2	48.6	51.0	54.1	57.8	61.3	63.4	65.7	67.0	22.2
	Women - 1946	45.4	46.6	48.3	49.8	52.4	55.6	59.3	63.0	65.4	68.2	70.1	24.7
	Women - 1977	46.4	47.5	49.4	51.1	53.9	56.9	59.8	62.6	64.5	67.0	69.0	22.6
54	Calf Circumference												
	Men - 1946	30.5	31.0	32.0	32.8	34.0	35.6	37.1	38.9	39.6	41.1	41.9	11.4
	Men - 1966	30.8	31.4	32.4	33.2	34.7	36.5	38.3	40.1	41.2	42.5	43.4	12.6
	Men (Trainees) - 1966	30.4	31.1	32.0	32.9	34.3	36.1	38.0	39.9	41.1	42.4	43.2	12.8
	Men (Trainees) - 1977			31.6	32.4	33.9	35.6	37.6	39.7	40.9			
	Women - 1977	29.8	30.2	31.0	31.9	33.4	35.0	36.7	38.3	39.2	40.4	41.3	11.5
55	Ankle Circumference												
	Men - 1966	19.7	20.0	20.5	20.9	21.7	22.6	23.6	24.6	25.2	25.9	26.4	6.7
	Men (Trainees) - 1966	19.7	20.0	20.5	20.9	21.7	22.6	23.6	24.6	25.2	25.9	26.4	6.7
	Men (Trainees) - 1977			19.3	19.8	20.7	21.7	22.7	23.5	24.0			
	Women - 1977	17.9	18.2	18.7	19.2	19.9	20.7	21.6	22.4	22.8	23.4	23.7	5.8
SURFACE MEASUREMENTS													
56	Shoulder Length												
	Men - 1946	10.9	11.4	12.4	13.2	14.2	15.5	16.5	17.5	18.0	18.8	19.0	8.1
	Men - 1966	11.2	11.8	12.7	13.5	14.9	16.3	17.6	18.6	19.2	20.0	20.5	9.3
	Men (Trainees) - 1966	11.3	11.6	12.4	13.2	14.6	16.0	17.1	18.0	18.6	19.5	20.2	8.9
	Women - 1946	9.6	9.8	10.3	10.7	11.4	12.1	12.9	13.6	14.1	14.7	15.2	5.6
	Women - 1977	12.5	12.8	13.3	13.7	14.3	15.0	15.7	16.4	16.8	17.3	17.7	5.2

TABLE 25a. STATISTICAL VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	N	Mean	Values in Centimeters					Range		Stature ratio
				SE(M)	S.D.	SE(SD)	V(%)	Min.	Max.	Total	
SURFACE MEASUREMENTS (continued)											
57	Interscye, Back										
	Men - 1946	24,432	37.63	0.02	3.00	0.01	7.97	24.5	50.5	26.0	.216
	Men - 1966	6682	39.10	0.04	3.16	0.03	8.07	27.2	51.7	24.5	.224
	Men (Trainees) - 1966	2639	38.93	0.06	3.12	0.04	8.00	27.8	50.7	22.9	.223
	Men (Trainees) - 1977	287	41.02	0.17	2.81	0.12	6.85	33.2	48.1	14.9	.236
	Women - 1946	8120	34.40	0.03	2.75	0.02	8.11	23.0	45.0	22.0	.212
	Women - 1977	1331	37.86	0.06	2.35	0.05	6.22	30.5	47.7	17.2	.232
58	Interscye, Front										
	Men (Trainees) - 1977	287	36.67	0.12	1.96	0.08	5.34	31.7	41.3	9.6	.211
	Women - 1977	1331	33.17	0.05	1.75	0.03	5.26	28.4	40.5	12.1	.204
59	Back Curvature - Chest Level										
	Men (Trainees) - 1977	287	45.17	0.20	3.37	0.14	7.46	37.8	54.7	16.9	.259
	Women - 1977	1331	41.97	0.09	3.17	0.06	7.55	30.6	62.5	31.9	.258
60	Back Curvature - Waist Level										
	Men (Trainees) - 1977	287	38.96	0.25	4.28	0.18	10.98	31.1	57.3	26.2	.224
	Women - 1977	1331	35.31	0.10	3.48	0.07	9.85	27.2	59.2	32.0	.217
61	Back Curvature - Hip Level										
	Men (Trainees) - 1977	287	46.57	0.18	3.13	0.13	6.72	39.5	58.4	18.9	.268
	Women - 1977	1331	47.51	0.10	3.74	0.07	7.86	35.9	68.6	32.7	.292
62	Waist Back Length										
	Men - 1966	6682	45.03	0.04	3.44	0.03	7.64	34.2	58.2	24.0	.258
	Men (Trainees) - 1966	2639	44.67	0.06	3.26	0.04	7.30	33.8	57.7	23.9	.256
	Men (Trainees) - 1977	287	44.90	0.19	3.20	0.13	7.13	37.7	53.0	15.3	.258
	Women - 1946	8115	37.78	0.03	2.28	0.02	6.10	29.0	47.0	18.0	.233
	Women - 1977	1331	40.85	0.07	2.65	0.05	6.50	33.7	51.5	17.8	.251

TABLE 25b. PERCENTILE VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	Percentiles in Centimeters										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		99th
SURFACE MEASUREMENTS (continued)													
57	Interscye, Back												
	Men - 1946	30.7	31.5	32.8	33.8	35.6	37.6	39.6	41.4	42.7	43.9	45.0	14.3
	Men - 1966	31.9	32.7	33.9	35.1	37.0	39.1	41.1	43.0	44.2	45.7	46.7	14.8
	Men (Trainees) - 1966	31.9	32.6	33.8	34.9	36.8	38.9	41.0	42.9	44.0	45.3	46.1	14.2
	Men (Trainees) - 1977			36.5	37.4	39.1	41.0	43.0	44.8	45.9			
	Women - 1946	28.4	29.0	30.0	30.9	32.5	34.3	36.2	38.0	39.1	40.4	41.3	12.9
	Women - 1977	32.4	33.0	33.4	34.8	36.3	37.9	39.4	40.8	41.7	42.8	43.6	11.2
58	Interscye, Front												
	Men (Trainees) - 1977	29.4	29.8	33.5	34.1	35.3	36.6	38.0	39.3	40.1			
	Women - 1977			30.4	31.0	32.0	33.1	34.3	35.4	36.2	37.0	37.6	8.2
59	Back Curvature - Chest Level												
	Men (Trainees) - 1977	35.3	36.0	40.5	41.2	42.6	44.7	47.3	50.0	51.5	49.2	50.6	15.3
	Women - 1977			37.0	38.1	39.8	41.8	43.9	46.0	47.4			
60	Back Curvature - Waist Level												
	Men (Trainees) - 1977	29.1	29.7	33.5	34.4	36.0	38.2	41.0	44.5	47.0	44.2	46.3	17.2
	Women - 1977			30.6	31.4	33.0	34.8	37.1	39.7	41.6			
61	Back Curvature - Hip Level												
	Men (Trainees) - 1977	39.6	40.5	42.4	43.0	44.2	46.0	48.5	51.0	52.5	55.9	57.3	17.7
	Women - 1977			41.8	43.0	45.0	47.3	49.8	52.3	54.0			
62	Waist Back Length												
	Men - 1966	37.5	38.3	39.5	40.6	42.6	44.9	47.3	49.6	50.8	52.2	53.0	15.5
	Men (Trainees) - 1966	37.5	38.2	39.4	40.4	42.4	44.6	46.9	49.0	50.2	51.4	52.2	14.7
	Men (Trainees) - 1977			39.6	40.7	42.6	44.9	47.1	49.2	50.3			
	Women - 1946	32.4	33.1	34.1	34.9	36.2	37.8	39.3	40.6	41.6	42.5	43.1	10.7
	Women - 1977	35.4	35.9	36.7	37.5	39.0	40.7	42.6	44.3	45.4	46.7	47.6	12.2

TABLE 25a. STATISTICAL VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	N	Values in Centimeters						Range		Stature ratio
			Mean	SE(M)	S.D.	SE(SD)	V(%)	Min.	Max.	Total	
SURFACE MEASUREMENTS (continued)											
63	Waist Front Length										
	Men (Trainees) - 1977	287	41.05	0.18	3.03	0.13	7.38	32.6	49.0	16.4	.236
	Women - 1946	8106	32.69	0.02	2.00	0.02	6.13	26.0	40.0	14.0	.202
	Women - 1977	1331	36.74	0.07	2.63	0.05	7.16	29.5	47.7	18.2	.225
64	Axilla to Waist Length										
	Women - 1946	8113	23.14	0.03	2.66	0.02	11.73	10.0	35.0	25.0	.143
	Women - 1977	1331	23.10	0.07	2.52	0.05	10.89	16.3	35.1	18.8	.142
65	Sleeve Inseam Length										
	Men - 1966	6682	48.59	0.03	2.68	0.02	5.51	39.2	59.7	20.5	.278
	Men (Trainees) - 1966	2639	48.61	0.05	2.57	0.04	5.30	40.2	59.7	19.5	.278
	Men (Trainees) - 1977	287	48.26	0.16	2.73	0.11	5.65	38.9	56.3	17.4	.277
	Women - 1977	1331	45.05	0.07	2.61	0.05	5.80	36.5	54.5	18.0	.276
66	Sleeve Outseam Length										
	Men (Trainees) - 1977	287	58.77	0.19	3.23	0.13	5.49	47.3	66.9	19.6	.338
	Women - 1977	1331	53.80	0.08	2.96	0.06	5.51	44.4	64.6	20.2	.330
67	Sleeve Length										
	Men - 1946	24,470	81.00	0.03	4.39	0.02	5.42	63.0	99.0	36.0	.466
	Men - 1966	6682	85.84	0.05	3.96	0.03	4.61	70.2	100.2	30.0	.492
	Men (Trainees) - 1966	2639	85.75	0.07	3.76	0.05	4.38	72.2	100.2	28.0	.491
68	Crotch Length										
	Men - 1946	24,434	72.32	0.04	5.70	0.02	7.88	51.0	99.0	48.0	.416
	Women - 1946	7778	70.05	0.07	5.77	0.05	8.29	46.0	99.0	53.0	.432
	Women - 1977	1331	72.93	0.15	5.46	0.11	7.49	52.6	100.2	47.6	.448

TABLE 25b. PERCENTILE VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	Percentiles in Centimeters										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		99th
SURFACE MEASUREMENTS (continued)													
63	Waist Front Length												
	Men (Trainees) - 1977	23.1	28.6	36.1	37.1	38.9	41.0	43.1	45.1	46.2			
	Women - 1946			29.4	30.2	31.4	32.6	34.0	35.2	26.1		37.1	37.9
	Women - 1977	31.6	32.0	32.8	33.5	34.9	36.5	38.3	40.1	41.4	43.0	44.3	9.8
													12.7
64	Axilla to Waist Length												
	Women - 1946	17.3	18.0	19.1	20.0	21.4	23.0	24.8	26.5	27.6	29.0	30.0	12.7
	Women - 1977	18.1	18.5	19.3	20.1	21.4	22.9	24.5	26.3	27.6	29.3	30.6	12.5
65	Sleeve Inseam Length												
	Men - 1966	42.3	43.0	44.2	45.2	46.8	48.6	50.3	52.0	53.0	54.2	55.1	12.8
	Men (Trainees) - 1966	42.8	43.4	44.3	45.2	46.8	48.6	50.3	51.8	52.8	54.1	55.0	12.2
	Men (Trainees) - 1977			43.9	44.9	46.4	48.2	50.1	51.8	52.9			
	Women - 1977	39.5	40.1	41.0	41.8	43.2	44.9	46.7	48.5	49.6	50.8	51.7	12.2
66	Sleeve Outseam Length												
	Men (Trainees) - 1977			53.8	54.9	56.6	58.6	60.9	63.2	64.5			
	Women - 1977	47.1	48.0	49.2	50.1	51.7	53.6	55.8	57.8	58.9	60.1	60.7	13.6
67	Sleeve Length												
	Men - 1946	70.9	71.6	73.9	75.4	78.0	81.0	84.1	86.6	88.4	90.2	91.4	20.5
	Men - 1966	76.6	77.8	79.4	80.8	83.2	85.7	88.4	90.9	92.4	94.2	95.3	18.7
	Men (Trainees) - 1966	77.2	78.2	79.6	80.9	83.1	85.7	88.2	90.6	92.0	93.7	94.8	17.6
68	Crotch Length												
	Men - 1946	59.9	61.2	63.5	65.3	68.3	71.9	75.7	79.5	82.0	86.4	90.2	30.3
	Women - 1946	57.5	59.1	61.4	63.2	66.2	69.6	73.4	77.4	80.2	83.8	86.5	29.0
	Women - 1977	58.1	60.5	63.7	66.2	69.7	73.1	76.5	79.6	81.5	83.8	85.3	27.2

TABLE 25a. STATISTICAL VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	N	Mean	SE(M)	Values in Centimeters					Stature ratio
					S.D.	SE(SD)	V(%)	Min.	Max.	
HEAD AND FACE MEASUREMENTS										
69	Head Circumference									
	Men - 1946	24,466	56.65	0.01	1.50	0.00	2.79	49.5	63.5	14.0
	Men - 1966	6682	56.11	0.02	1.61	0.01	2.86	51.0	63.8	12.8
	Men (Trainees) - 1966	2639	55.90	0.03	1.56	0.02	2.79	51.0	61.7	10.7
	Men (Trainees) - 1977	287	56.01	0.10	1.63	0.07	2.90	51.6	60.3	8.7
	Women - 1946	8112	55.15	0.02	1.55	0.01	2.82	50.0	61.0	11.0
	Women - 1977	1331	54.92	0.04	1.64	0.03	2.98	49.7	61.2	11.5
70	Sagittal Arc									
	Men (Trainees) - 1977	102	34.80	0.15	1.50	0.11	4.31	30.0	38.8	8.8
	Women - 1977	216	33.63	0.11	1.55	0.07	4.61	29.9	38.9	9.0
71	Bitrignon-Coronal Arc									
	Men (Trainees) - 1977	102	34.12	0.12	1.26	0.09	3.71	31.0	37.2	6.2
	Women - 1977	216	33.22	0.09	1.27	0.06	3.84	30.2	38.2	8.1
72	Bitrignon-Frontal Arc									
	Men (Trainees) - 1977	102	29.31	0.11	1.07	0.07	3.65	26.5	31.7	5.2
	Women - 1977	216	28.40	0.07	1.03	0.05	3.62	25.7	31.2	5.5
73	Bitrignon-Menton Arc									
	Men (Trainees) - 1977	102	31.10	0.13	1.30	0.09	4.18	28.3	34.2	5.9
	Women - 1977	216	29.36	0.09	1.31	0.06	4.47	25.9	33.4	7.5
74	Bitrignon-Submandibular Arc									
	Men (Trainees) - 1977	102	28.63	0.13	1.28	0.09	4.49	25.9	31.8	5.9
	Women - 1977	216	26.49	0.09	1.34	0.06	5.07	23.2	30.5	7.3

TABLE 25b. PERCENTILE VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	Percentiles in Centimeters										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		99th
HEAD AND FACE MEASUREMENTS													
69	Head Circumference												
	Men - 1946	53.0	53.5	54.1	54.6	55.6	56.6	57.7	58.7	59.3	60.1	60.6	7.6
	Men - 1966	52.4	52.9	53.5	54.1	55.0	56.1	57.2	58.2	58.8	59.3	60.0	7.6
	Men (Trainees) - 1966	52.2	52.7	53.4	53.9	54.9	55.9	56.9	57.9	58.5	59.2	59.7	7.5
	Men (Trainees) - 1977			53.2	53.9	55.0	56.1	57.1	58.0	58.6			
	Women - 1946	51.5	52.0	52.6	53.2	54.1	55.1	56.2	57.2	57.8	58.5	59.0	7.5
	Women - 1977	51.4	51.8	52.3	52.9	53.8	54.9	56.0	57.0	57.7	58.6	59.2	7.8
70	Sagittal Arc												
	Men (Trainees) - 1977			32.7	33.2	33.9	34.7	35.7	36.8	37.5			
	Women - 1977	30.6	31.0	31.1	31.7	32.5	33.6	34.6	35.6	36.1	37.1	38.2	7.6
71	Bitrignon-Coronal Arc												
	Men (Trainees) - 1977			31.9	32.4	33.2	34.2	35.1	35.7	36.1			
	Women - 1977	30.5	30.8	31.3	31.7	32.4	33.2	34.0	34.9	35.4	36.0	36.4	5.9
72	Bitrignon-Frontal Arc												
	Men (Trainees) - 1977			27.6	28.0	28.6	29.3	30.1	30.7	31.1	30.6	31.0	4.9
	Women - 1977	26.1	26.3	26.7	27.0	27.7	28.4	29.1	29.7	30.1			
73	Bitrignon-Menton Arc												
	Men (Trainees) - 1977			29.0	29.4	30.1	31.1	32.2	32.7	33.1			
	Women - 1977	26.3	26.7	27.3	27.7	28.5	29.3	30.2	31.1	31.6	32.3	32.7	6.4
74	Bitrignon-Submandibular Arc												
	Men (Trainees) - 1977			26.7	26.9	27.5	28.7	29.6	30.4	30.7	29.3	29.5	6.0
	Women - 1977	23.5	23.9	24.5	24.9	25.5	26.4	27.4	28.4	28.9			

TABLE 25a. STATISTICAL VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	N	Mean	Values in Centimeters					Range		Stature ratio
				SE(M)	S.D.	SE(ED)	V(%)	Min.	Max.	Total	
75	Head Length										
	Men - 1946	24,471	19.47	0.00	0.70	0.00	3.60	15.5	23.0	7.5	.112
	Men - 1966	6682	19.47	0.01	0.73	0.01	3.77	16.6	22.4	5.8	.112
	Men (Trainees) - 1966	2639	19.41	0.01	0.72	0.01	3.69	16.6	21.8	5.2	.111
	Men (Trainees) - 1977	287	19.47	0.04	0.70	0.03	3.61	16.8	21.4	4.6	.112
	Women - 1946	8118	18.36	0.01	0.65	0.01	3.54	15.8	20.5	4.7	.113
76	Women - 1977	1331	18.71	0.02	0.67	0.01	3.58	16.2	20.8	4.6	.115
	Glabella to back of head										
	Men (Trainees) - 1977	102	19.61	0.07	0.71	0.05	3.65	17.9	21.7	3.8	.113
	Women - 1977	216	19.25	0.07	0.98	0.05	5.11	16.4	22.8	6.4	.118
	Sellion to back of head										
	Men - 1966	6682	19.10	0.01	0.72	0.01	3.77	16.4	22.0	5.6	.109
77	Men (Trainees) - 1966	2639	19.06	0.01	0.71	0.01	3.73	16.6	21.4	4.8	.109
	Men (Trainees) - 1977	102	19.49	0.07	0.70	0.05	3.62	17.7	21.6	3.9	.112
	Women - 1977	216	20.16	0.07	0.96	0.05	4.75	17.6	23.9	6.3	.124
	Pronasale to back of head										
	Men - 1966	6682	22.19	0.01	0.83	0.01	3.75	18.8	25.4	6.6	.127
	Men (Trainees) - 1966	2639	22.17	0.02	0.83	0.01	3.74	18.8	25.4	6.6	.127
78	Men (Trainees) - 1977	102	22.20	0.07	0.75	0.05	3.37	20.1	24.3	4.2	.128
	Women - 1977	216	21.49	0.07	0.98	0.05	4.54	18.9	25.0	6.1	.132
	Subnasale to back of head										
	Men (Trainees) - 1977	102	20.87	0.08	0.78	0.05	3.75	19.2	23.3	4.1	.120
	Women - 1977	216	20.11	0.07	1.00	0.05	4.98	17.5	23.7	6.2	.123

TABLE 25b. PERCENTILE VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	Percentiles in Centimeters										Range 99th (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		
HEAD AND FACE MEASUREMENTS (continued)													
75	Head Length												
	Men - 1946	17.8	18.0	18.3	18.6	19.0	19.5	20.0	20.4	20.6	20.9	21.2	3.4
	Men - 1966	17.8	18.0	18.2	18.5	19.0	19.5	20.0	20.4	20.7	21.0	21.2	3.4
	Men (Trainees) - 1966	17.7	17.9	18.2	18.5	18.9	19.4	19.9	20.3	20.6	20.9	21.1	3.4
	Men (Trainees) - 1977			18.3	18.6	19.0	19.5	19.9	20.3	20.6			
	Women - 1946	16.9	17.0	17.3	17.5	17.9	18.4	18.8	19.2	19.4	19.7	19.9	3.0
	Women - 1977	17.1	17.3	17.6	17.9	18.3	18.7	19.2	19.6	19.8	20.1	20.3	3.2
76	Glabella to back of head												
	Men (Trainees) - 1977	17.1	17.5	18.5	18.8	19.1	19.6	20.0	20.5	20.8			5.1
	Women - 1977			17.8	18.2	18.6	19.1	19.8	20.6	21.1	21.7	22.2	
77	Sellion to back of head												
	Men - 1966	17.4	17.6	17.9	18.2	18.6	19.1	19.6	20.0	20.3	20.6	20.8	3.4
	Men (Trainees) - 1966	17.4	17.6	17.9	18.1	18.6	19.1	19.5	20.0	20.2	20.5	20.8	3.4
	Men (Trainees) - 1977			18.4	18.6	19.1	19.5	19.9	20.3	20.7			
	Women - 1977	18.1	18.4	18.8	19.1	19.5	20.0	20.7	21.4	22.0	22.6	23.0	4.9
78	Pronasale to back of head												
	Men - 1966	20.2	20.4	20.8	21.1	21.6	22.2	22.8	23.2	23.5	23.9	24.1	3.9
	Men (Trainees) - 1966	20.2	20.4	20.8	21.1	21.6	22.2	22.7	23.2	23.5	23.8	24.1	3.9
	Men (Trainees) - 1977			21.0	21.2	21.7	22.2	22.7	23.2	23.4			
	Women - 1977	19.4	19.7	20.1	20.4	20.8	21.4	22.1	22.8	23.2	23.8	24.2	4.8
79	Subnasale to back of head												
	Men (Trainees) - 1977	18.0	18.3	19.6	19.9	20.3	20.9	21.3	21.8	22.2			
	Women - 1977			18.6	18.9	19.4	20.0	20.7	21.4	21.9	22.5	22.9	4.9

TABLE 25a. STATISTICAL VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	N	Values in Centimeters						Range		Stature ratio	
			Mean	SE(M)	S.D.	SE(SD)	V(%)	Min.	Max.	Total		
HEAD AND FACE MEASUREMENTS (continued)												
80	Lip Protrusion to back of head	Men (Trainees) - 1977	102	20.91	0.10	1.00	0.07	4.78	18.8	23.9	5.1	.120
		Women - 1977	216	20.10	0.08	1.15	0.06	5.75	17.5	24.2	6.7	.123
81	Menton to back of head	Men (Trainees) - 1977	102	20.22	0.11	1.11	0.08	5.50	17.6	23.6	6.0	.116
		Women - 1977	216	19.47	0.07	1.10	0.05	5.65	17.0	22.8	5.8	.119
82	Ectocanthus to back of head	Men - 1966	6682	17.24	0.01	0.98	0.01	5.67	13.8	20.8	7.0	.099
		Men (Trainees) - 1966	2639	17.02	0.02	0.90	0.01	5.26	13.8	20.2	6.4	.097
		Men (Trainees) - 1977	102	17.50	0.07	0.75	0.05	4.27	15.8	19.5	3.7	.101
		Women - 1977	216	17.17	0.06	0.93	0.04	5.43	14.8	20.9	6.1	.105
83	Tragion to back of head	Men - 1966	6682	10.28	0.01	1.19	0.01	11.58	6.8	14.6	7.8	.059
		Men (Trainees) - 1966	2639	10.13	0.02	1.15	0.02	11.39	6.8	13.6	6.8	.058
		Men (Trainees) - 1977	102	10.32	0.07	0.71	0.05	6.91	8.2	12.0	3.8	.059
		Women - 1977	216	10.06	0.06	0.91	0.04	9.01	8.4	13.5	5.1	.062
84	Head Breadth	Men - 1946	24,447	15.21	0.00	0.59	0.00	3.88	12.5	18.0	5.5	.087
		Men - 1966	6682	15.27	0.01	0.59	0.01	3.83	12.8	17.4	4.6	.088
		Men (Trainees) - 1966	2639	15.27	0.01	0.57	0.01	3.70	13.2	17.4	4.2	.087
		Men (Trainees) - 1977	287	15.06	0.03	0.54	0.02	3.56	13.7	16.7	3.0	.087
		Women - 1946	8118	14.56	0.01	0.55	0.00	3.76	12.4	16.7	4.3	.090
		Women - 1977	1331	14.61	0.01	0.54	0.01	3.69	13.0	16.5	3.5	.090

TABLE 25b. PERCENTILE VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	Percentiles in Centimeters										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		99th
HEAD AND FACE MEASUREMENTS (continued)													
80	Lip Protrusion to back of head												
	Men (Trainees) - 1977	18.0	18.2	19.4	19.7	20.2	20.8	21.5	22.3	22.8	23.0	23.7	5.7
	Women - 1977			18.5	18.8	19.3	20.0	20.8	21.6	22.2			
81	Menton to back of head												
	Men (Trainees) - 1977	17.2	17.4	17.8	18.2	18.7	19.4	20.2	20.9	21.4	22.0	22.4	5.2
	Women - 1977												
82	Ectocanthus to back of head												
	Men - 1966	15.1	15.3	15.7	16.0	16.6	17.2	17.9	18.6	18.9	19.3	19.4	4.3
	Men (Trainees) - 1966	15.0	15.3	15.6	15.9	16.4	17.0	17.6	18.2	18.6	19.0	19.2	4.2
	Men (Trainees) - 1977			16.3	16.5	17.0	17.5	18.0	18.4	18.7			
	Women - 1977	15.3	15.5	15.8	16.1	16.5	17.1	17.7	18.4	18.8	19.5	20.0	4.7
83	Tragion to back of head												
	Men - 1966	7.9	8.1	8.5	8.8	9.4	10.2	11.1	11.9	12.4	12.7	12.9	5.0
	Men (Trainees) - 1966	7.8	8.1	8.4	8.7	9.3	10.0	10.9	11.7	12.2	12.6	12.8	5.0
	Men (Trainees) - 1977			9.2	9.4	9.9	10.3	10.8	11.3	11.5			
	Women - 1977	8.6	8.6	8.8	9.0	9.4	9.9	10.6	11.2	11.7	12.4	12.9	4.3
84	Head Breadth												
	Men - 1946	13.8	14.0	14.3	14.5	14.8	15.2	15.6	16.0	16.2	16.5	16.7	2.9
	Men - 1966	13.9	14.1	14.3	14.6	14.9	15.2	15.6	16.0	16.3	16.5	16.7	2.8
	Men (Trainees) - 1966	14.0	14.1	14.4	14.6	14.9	15.3	15.6	16.0	16.2	16.5	16.7	2.7
	Men (Trainees) - 1977			14.2	14.4	14.7	15.1	15.4	15.7	16.0			
	Women - 1946	13.2	13.4	13.7	13.9	14.2	14.6	14.9	15.2	15.4	15.7	15.9	2.7
	Women - 1977	13.4	13.6	13.8	13.9	14.2	14.6	15.0	15.3	15.6	15.8	16.1	2.7

TABLE 25a. STATISTICAL VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	N	Values in Centimeters							Stature ratio
			Mean	SE(M)	S.D.	SE(SD)	V(%)	Range		
								Min.	Max.	
HEAD AND FACE MEASUREMENTS (continued)										
85	Bitragion Breadth									
	Men - 1966	6682	13.50	0.01	0.56	0.00	4.18	11.4	15.6	4.2
	Men (Trainees) - 1966	2639	13.46	0.01	0.55	0.01	4.10	11.8	15.5	3.7
	Men (Trainees) - 1977	102	13.50	0.06	0.59	0.04	4.36	12.1	14.9	2.8
	Women - 1977	216	12.98	0.04	0.53	0.03	4.11	11.5	14.6	3.1
86	Head Height (Tragion-top of head)									
	Men - 1946	24,630	13.11	0.00	0.60	0.00	4.58	10.0	16.0	6.0
	Men - 1966	6682	13.23	0.01	0.79	0.01	5.99	10.0	16.0	6.0
	Men (Trainees) - 1966	2639	13.25	0.02	0.79	0.01	5.99	10.0	15.8	5.8
	Men (Trainees) - 1977	102	13.39	0.07	0.68	0.05	5.07	11.5	15.4	3.9
	Women - 1946	8114	13.15	0.01	0.90	0.01	6.82	10.0	16.4	6.4
	Women - 1977	216	13.19	0.05	0.67	0.03	5.08	11.2	15.6	4.2
87	Ectocanthus to top of head									
	Men (Trainees) - 1977	102	11.04	0.08	0.79	0.06	7.19	8.9	13.3	4.4
	Women - 1977	216	12.13	0.05	0.80	0.04	6.61	9.9	16.0	6.1
88	Glabella to top of head									
	Men (Trainees) - 1977	102	7.90	0.09	0.86	0.06	10.82	5.9	9.8	3.9
	Women - 1977	216	8.44	0.06	0.87	0.04	10.28	6.4	12.7	6.3
89	Sellion to top of head									
	Men (Trainees) - 1977	102	9.66	0.10	1.00	0.07	10.34	7.8	12.5	4.7
	Women - 1977	216	10.06	0.06	0.93	0.04	9.26	7.4	14.4	7.0
90	Pronasale to top of head									
	Men (Trainees) - 1977	102	13.14	0.11	1.07	0.07	8.11	10.9	16.3	5.4
	Women - 1977	216	13.55	0.07	0.99	0.05	7.34	11.0	18.0	7.0

TABLE 25b. PERCENTILE VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	Percentiles in Centimeters										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		99th
HEAD AND FACE MEASUREMENTS (continued)													
85	Bitragion Breadth												
	Men - 1966	12.2	12.4	12.6	12.8	13.1	13.5	13.9	14.2	14.4	14.7	14.8	2.6
	Men (Trainees) - 1966	12.2	12.3	12.6	12.8	13.1	13.5	13.8	14.2	14.4	14.6	14.8	2.6
	Men (Trainees) - 1977			12.5	12.7	13.1	13.5	13.9	14.3	14.5			
	Women - 1977	11.6	11.8	12.1	12.3	12.6	13.0	13.3	13.7	13.8	14.1	14.2	2.6
86	Head Height (Tragion-top of head)												
	Men - 1946	11.6	11.8	12.1	12.3	12.7	13.1	13.5	13.9	14.2	14.5	14.7	3.1
	Men - 1966	11.3	11.6	11.9	12.2	12.7	13.2	13.8	14.2	14.5	14.8	15.0	3.7
	Men (Trainees) - 1966	11.3	11.5	11.9	12.2	12.7	13.3	13.8	14.2	14.5	14.8	15.0	3.7
	Men (Trainees) - 1977			12.3	12.5	13.0	13.4	13.8	14.2	14.4			
	Women - 1946	11.0	11.2	11.6	12.0	12.6	13.2	13.8	14.3	14.6	15.0	15.4	4.4
	Women - 1977	11.8	11.9	12.1	12.3	12.7	13.2	13.6	14.0	14.3	14.6	14.8	3.0
87	Ectocanthus to top of head												
	Men (Trainees) - 1977	10.2	10.5	9.8	10.1	10.5	11.0	11.6	12.1	12.4			
	Women - 1977			10.8	11.1	11.6	12.1	12.7	13.1	13.4	13.6	13.7	3.5
88	Glabella to top of head												
	Men (Trainees) - 1977	6.7	6.8	6.5	6.8	7.3	7.9	8.6	9.0	9.4			
	Women - 1977			7.1	7.4	7.8	8.4	9.0	9.5	9.9	10.3	10.6	3.9
89	Sellion to top of head												
	Men (Trainees) - 1977	8.0	8.2	8.2	8.3	8.8	9.7	10.3	11.0	11.3			
	Women - 1977			8.6	8.9	9.4	10.1	10.7	11.2	11.5	11.8	12.1	4.1
90	Pronasale to top of head												
	Men (Trainees) - 1977	11.4	11.6	11.6	11.8	12.3	13.0	13.9	14.6	15.1			
	Women - 1977			11.9	12.3	12.9	13.6	14.2	14.8	15.1	15.5	15.7	4.3

TABLE 25a. STATISTICAL VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	N	Mean	Values in Centimeters							Stature ratio
				SE(M)	S.D.	SE(SD)	V(%)	Range			
								Min.	Max.		
HEAD AND FACE MEASUREMENTS (continued)											
91	Subnasale to top of head										
	Men (Trainees) - 1977	102	14.49	0.09	0.95	0.07	6.59	12.2	17.2	5.0	.083
	Women - 1977	216	14.80	0.06	0.95	0.05	6.40	12.5	19.4	6.9	.091
92	Stomion to top of head										
	Men (Trainees) - 1977	102	16.86	0.10	1.00	0.07	5.92	14.4	19.4	5.0	.097
	Women - 1977	216	16.84	0.07	1.01	0.05	5.99	14.4	21.8	7.4	.103
93	Menton to top of head										
	Men (Trainees) - 1977	102	21.34	0.10	1.00	0.07	4.69	19.0	24.0	5.0	.123
	Women - 1977	216	20.88	0.07	1.02	0.05	4.88	18.5	25.1	6.6	.128
94	Face Length (Menton-Sellion)										
	Men - 1946	24,494	12.50	0.00	0.71	0.00	5.68	10.0	16.0	6.0	.072
	Men - 1966	6681	12.03	0.01	0.66	0.01	5.50	9.6	14.6	5.0	.069
	Men (Trainees) - 1966	2639	11.98	0.01	0.66	0.01	5.49	9.6	14.6	5.0	.069
	Men (Trainees) - 1977	102	11.70	0.07	0.68	0.05	5.77	10.2	13.2	3.0	.067
	Women - 1946	8120	11.14	0.01	0.72	0.01	6.42	8.9	15.0	6.1	.069
	Women - 1977	216	10.69	0.04	0.57	0.03	5.31	9.5	12.3	2.8	.066
95	Menton-Crinion										
	Men (Trainees) - 1977	102	18.52	0.08	0.85	0.06	4.59	16.5	20.7	4.2	.106
	Women - 1977	216	17.58	0.06	0.83	0.04	4.71	15.2	20.2	5.0	.108
96	Minimum Frontal Breadth										
	Men - 1946	24,406	10.93	0.00	0.59	0.00	5.40	9.0	15.0	6.0	.063
	Men (Trainees) - 1977	102	11.13	0.08	0.80	0.06	7.23	9.2	12.7	3.5	.064
	Women - 1946	8118	10.05	0.01	0.59	0.00	5.89	7.5	12.1	4.6	.062
	Women - 1977	216	10.52	0.03	0.51	0.02	4.86	9.2	12.2	3.0	.065

TABLE 25b. PERCENTILE VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	Percentiles in Centimeters											Range (1st-99th)
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th	99th	
HEAD AND FACE MEASUREMENTS (continued)													
91	Subnasale to top of head Men (Trainees) - 1977 Women - 1977	12.6	12.9	13.0 13.3	13.3 13.7	13.8 14.2	14.4 14.8	15.2 15.4	15.8 16.0	16.2 16.4	16.7	16.9	4.3
92	Stomion to top of head Men (Trainees) - 1977 Women - 1977	14.7	14.9	15.4 15.2	15.7 15.6	16.1 16.2	16.8 16.8	17.5 17.5	18.3 18.0	18.7 18.4	18.8	19.1	4.4
93	Menton to top of head Men (Trainees) - 1977 Women - 1977	18.7	18.9	19.9 19.3	20.2 19.6	20.6 20.2	21.2 20.8	22.0 21.6	22.7 22.2	23.2 22.6	23.0	23.3	4.6
94	Face Length (Menton-Sellion) Men - 1946 Men - 1966 Men (Trainees) - 1966 Men (Trainees) - 1977 Women - 1946 Women - 1977	10.8 10.5 10.5 9.7 9.5	11.0 10.7 10.7 9.8 9.7	11.4 11.0 10.9 10.6 10.0 9.9	11.6 11.2 11.2 10.8 10.3 10.0	12.0 11.6 11.5 11.2 10.7 10.3	12.5 12.0 12.0 11.7 11.1 10.6	13.0 12.5 12.4 12.2 11.5 11.1	13.4 12.9 12.8 12.6 12.0 11.5	13.7 13.1 13.1 12.8 12.3 11.8	14.0 13.4 13.4 12.9 12.0	14.2 13.6 13.6	3.4 3.1 3.1 3.7 2.6
95	Menton-Crinion Men (Trainees) - 1977 Women - 1977	15.7	15.9	17.1 16.2	17.4 16.5	18.0 17.0	18.6 17.6	19.1 18.1	19.6 18.6	19.9 19.0	19.3	19.5	3.8
96	Minimum Frontal Breadth Men - 1946 Men (Trainees) - 1977 Women - 1946 Women - 1977	9.6 8.4 9.5	9.7 8.7 9.6	10.0 9.9 9.0 9.7	10.2 10.1 9.3 9.9	10.5 10.5 9.7 10.2	10.9 11.2 10.1 10.5	11.3 11.8 10.4 10.9	11.7 12.2 10.8 11.2	11.9 12.4 11.0 11.4	12.2 11.2 11.6	12.4 11.3 11.8	2.8 2.9 2.3

TABLE 25b. PERCENTILE VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	Percentiles in Centimeters										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		99th
HEAD AND FACE MEASUREMENTS (continued)													
97	Face Breadth (Bizygomatic)												
	Men - 1946	12.4	12.6	12.9	13.1	13.5	13.9	14.3	14.7	14.9	15.1	15.3	2.9
	Men - 1966	12.7	12.9	13.1	13.3	13.6	14.0	14.4	14.7	14.9	15.2	15.4	2.7
	Men (Trainees) - 1966	12.7	12.8	13.1	13.3	13.6	13.9	14.3	14.6	14.9	15.1	15.3	2.6
	Men (Trainees) - 1977			12.8	13.0	13.4	13.8	14.2	14.4	14.5			
	Women - 1946	11.7	11.9	12.2	12.4	12.7	13.1	13.4	13.7	13.9	14.2	14.3	2.6
	Women - 1977	11.9	12.0	12.3	12.5	12.9	13.2	13.6	13.8	14.0	14.3	14.6	2.7
98	Biocular Breadth												
	Men - 1946	8.0	8.1	8.4	8.5	8.8	9.2	9.6	9.9	10.1	10.4	10.5	2.5
	Men (Trainees) - 1977			9.3	9.5	9.8	10.1	10.5	10.7	10.9			
	Women - 1946	8.0	8.1	8.3	8.4	8.7	9.0	9.3	9.6	9.8	10.0	10.1	2.1
	Women - 1977	8.5	8.7	8.8	9.0	9.3	9.6	10.0	10.3	10.5	10.7	10.8	2.3
99	Interpupillary Breadth												
	Men - 1966	5.2	5.3	5.5	5.6	5.9	6.1	6.4	6.6	6.8	7.0	7.1	1.9
	Men (Trainees) - 1966	5.2	5.3	5.4	5.6	5.8	6.1	6.4	6.6	6.8	7.0	7.1	1.9
	Men (Trainees) - 1977			5.1	5.3	5.6	5.9	6.2	6.5	6.7			
	Women - 1977	4.9	4.9	5.1	5.2	5.5	5.8	6.1	6.4	6.5	6.7	6.9	2.0
100	Interocular Breadth												
	Men - 1946	2.5	2.7	2.8	2.9	3.0	3.2	3.4	3.6	3.8	4.0	4.1	1.6
	Women - 1946	2.4	2.5	2.7	2.8	3.0	3.2	3.4	3.6	3.7	3.8	3.9	1.5
101	Nose Length (Subnasale-Sellion)												
	Men - 1946	4.4	4.5	4.8	4.9	5.2	5.5	5.8	6.2	6.4	6.6	6.8	2.4
	Men (Trainees) - 1977			4.4	4.5	4.7	4.9	5.2	5.5	5.6			
	Women - 1946	3.7	3.8	4.0	4.2	4.5	4.8	5.0	5.4	5.8	6.4	7.0	3.3
	Women - 1977	3.8	3.9	4.1	4.2	4.4	4.6	4.8	5.0	5.2	5.3	5.3	1.5

TABLE 25a. STATISTICAL VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	N	Values in Centimeters						Range		Stature ratio
			Mean	SE(M)	S.D.	SE(SD)	V(%)	Min.	Max.		
										Total	
HEAD AND FACE MEASUREMENTS (continued)											
102	Nasal Root Breadth										
	Men - 1946	24,348	1.42	0.00	0.23	0.00	16.20	0.7	2.6	1.9	.008
	Women - 1946	8114	1.56	0.00	0.25	0.00	15.72	1.0	2.6	1.6	.010
103	Nose Breadth										
	Men - 1946	24,382	3.37	0.00	0.29	0.00	8.60	2.0	5.5	3.5	.019
	Men (Trainees) - 1977	102	3.72	0.05	0.47	0.03	12.76	2.8	4.8	2.0	.021
	Women - 1946	8119	3.13	0.00	0.29	0.00	9.26	2.0	4.4	2.4	.019
	Women - 1977	216	3.41	0.03	0.45	0.02	13.25	2.5	4.7	2.2	.021
104	Mouth Breadth, Smiling										
	Men (Trainees) - 1977	102	6.47	0.07	0.72	0.05	11.08	5.1	8.1	3.0	.037
	Women - 1977	216	5.88	0.04	0.56	0.03	9.51	4.5	7.6	3.1	.036
105	Ear Length										
	Men (Trainees) - 1977	102	6.22	0.04	0.44	0.03	7.09	4.9	7.2	2.3	.036
106	Ear Breadth										
	Men (Trainees) - 1977	102	4.34	0.04	0.36	0.03	8.37	3.4	5.3	1.9	.025

TABLE 25b. PERCENTILE VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	Percentiles in Centimeters										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		99th
HEAD AND FACE MEASUREMENTS (continued)													
102	Nasal Root Breadth												
	Men - 1946	1.0	1.0	1.0	1.1	1.3	1.4	1.6	1.8	1.8	2.0	2.0	1.0
	Women - 1946	1.0	1.1	1.2	1.3	1.4	1.5	1.7	1.9	2.0	2.1	2.2	1.2
103	Nose Breadth												
	Men - 1946	2.8	2.8	3.0	3.0	3.2	3.4	3.6	3.8	3.9	4.0	4.1	1.3
	Men (Trainees) - 1977			3.0	3.1	3.4	3.7	4.1	4.4	4.6			
	Women - 1946	2.5	2.6	2.7	2.8	3.0	3.1	3.3	3.5	3.6	3.8	4.0	1.5
	Women - 1977	2.6	2.7	2.9	3.0	3.1	3.3	3.6	4.1	4.3	4.5	4.6	2.0
104	Mouth Breadth, Smiling												
	Men (Trainees) - 1977			5.4	5.5	5.9	6.4	7.0	7.5	7.7			
	Women - 1977	4.7	4.8	5.0	5.2	5.5	5.9	6.3	6.6	6.8	7.0	7.1	2.4
105	Ear Length												
	Men (Trainees) - 1977			5.5	5.7	6.0	6.2	6.5	6.8	6.9			
106	Ear Breadth												
	Men (Trainees) - 1977			3.8	3.9	4.1	4.3	4.6	4.8	5.0			

TABLE 25a. STATISTICAL VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	N	Mean	SE(M)	Values in Centimeters					Stature ratio	
					S.D.	SE(SD)	V(%)	Min.	Max.		Total
HAND MEASUREMENTS											
107	Hand Length										
	Men - 1946	24,487	19.25	0.00	0.93	0.00	4.83	15.0	23.0	8.0	.111
	Men - 1966	6682	19.03	0.01	0.96	0.01	5.06	15.4	23.6	8.2	.109
	Men (Trainees) - 1966	2639	19.05	0.02	0.91	0.01	4.79	16.4	23.5	7.1	.109
	Men (Trainees) - 1977	287	19.00	0.05	0.99	0.04	5.19	15.9	21.7	5.8	.109
	Women - 1946	8113	17.49	0.01	0.82	0.01	4.70	14.7	20.8	6.1	.108
	Women - 1977	1331	17.44	0.02	0.90	0.02	5.17	14.9	20.4	5.5	.107
108	Palm Length										
	Men - 1966	6682	10.59	0.01	0.63	0.01	5.93	8.0	13.4	5.4	.061
	Men (Trainees) - 1966	2639	10.62	0.01	0.61	0.01	5.76	8.0	13.0	5.0	.061
	Men (Trainees) - 1977	287	10.75	0.03	0.58	0.02	5.38	9.0	12.1	3.1	.062
	Women - 1977										
109	Hand Breadth										
	Men - 1946	24,488	8.67	0.00	0.48	0.00	5.54	6.0	11.0	5.0	.050
	Men - 1966	6681	8.90	0.01	0.49	0.00	5.52	7.0	10.7	3.7	.051
	Men (Trainees) - 1966	2639	8.88	0.01	0.46	0.01	5.18	7.2	10.7	3.5	.051
	Men (Trainees) - 1977	287	8.92	0.03	0.43	0.02	4.80	7.8	10.0	2.2	.051
	Women - 1946	8113	7.69	0.01	0.51	0.00	6.57	6.3	9.9	3.6	.047
	Women - 1977	1331	7.82	0.01	0.39	0.01	4.97	6.6	9.1	2.5	.048
110	Hand Circumference										
	Men - 1966	6682	21.61	0.01	1.14	0.01	5.26	17.8	26.3	8.5	.121
	Men (Trainees) - 1966	2639	21.60	0.02	1.12	0.02	5.19	18.2	26.1	7.9	.124
	Men (Trainees) - 1977	287	21.11	0.06	1.00	0.04	4.73	18.1	24.0	5.9	.121
	Women - 1977	1331	18.45	0.02	0.86	0.02	4.64	15.8	21.2	5.4	.113

TABLE 25b. PERCENTILE VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	Percentiles in Centimeters										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		99th
HAND MEASUREMENTS													
107	Hand Length												
	Men - 1946	17.1	17.4	17.8	18.1	18.6	19.2	19.8	20.4	20.8	21.2	21.5	4.4
	Men - 1966	16.9	17.2	17.5	17.8	18.4	19.0	19.6	20.3	20.7	21.1	21.4	4.5
	Men (Trainees) - 1966	17.0	17.2	17.6	17.9	18.4	19.0	19.7	20.2	20.6	21.0	21.3	4.3
	Men (Trainees) - 1977			17.4	17.8	18.3	19.0	19.7	20.3	20.6			
	Women - 1946	15.5	15.8	16.1	16.4	16.9	17.5	18.0	18.6	18.9	19.3	19.6	4.1
108	Hand Length												
	Men - 1946	15.5	15.7	16.1	16.3	16.8	17.4	18.0	18.7	19.0	19.4	19.6	4.1
	Men - 1966												
	Men (Trainees) - 1966	9.2	9.3	9.6	9.8	10.2	10.6	11.0	11.4	11.7	12.0	12.2	3.0
	Men (Trainees) - 1977	9.2	9.4	9.6	9.8	10.2	10.6	11.0	11.4	11.7	11.9	12.1	2.9
	Women - 1977	8.8	8.9	9.0	9.2	9.5	9.9	10.2	10.6	10.8	11.0	11.2	2.4
109	Hand Breadth												
	Men - 1946	7.5	7.6	7.8	8.0	8.3	8.7	9.0	9.3	9.5	9.7	9.9	2.4
	Men - 1966	7.8	7.9	8.1	8.3	8.6	8.9	9.2	9.5	9.7	10.0	10.1	2.3
	Men (Trainees) - 1966	7.9	8.0	8.2	8.3	8.6	8.9	9.2	9.5	9.7	9.9	10.0	2.1
	Men (Trainees) - 1977			8.3	8.4	8.6	8.9	9.2	9.5	9.7			
	Women - 1946	6.7	6.8	7.0	7.1	7.3	7.6	8.0	8.4	8.6	9.0	9.2	2.5
110	Hand Breadth	7.0	7.0	7.2	7.3	7.6	7.8	8.1	8.3	8.5	8.6	8.7	1.7
	Men - 1946												
	Men - 1966												
	Men (Trainees) - 1966	19.1	19.4	19.8	20.2	20.8	21.6	22.3	23.1	23.6	24.1	24.5	5.4
	Men (Trainees) - 1977	19.2	19.5	19.9	20.2	20.8	21.5	22.3	23.1	23.6	24.1	24.4	5.2
	Women - 1977	16.5	16.7	17.0	17.3	17.8	18.4	19.0	19.6	19.9	20.2	20.4	3.9

TABLE 25a. STATISTICAL VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	Values in Centimeters							Stature ratio
		N	Mean	SE(M)	S.D.	SE(SD)	V(%)	Range Min. Max.	
FOOT MEASUREMENTS									
111	Foot Length								
	Men - 1946	24,372	26.51	0.00	1.21	0.00	4.74	30.5	9.5
	Men - 1966	6682	26.78	0.02	1.30	0.01	4.86	32.4	11.0
	Men (Trainees) - 1966	2639	26.85	0.02	1.26	0.02	4.70	31.8	9.6
	Men (Trainees) - 1977	286	26.75	0.08	1.33	0.06	4.98	29.6	7.1
	Women - 1946	3321	23.93	0.02	1.11	0.01	4.62	27.9	7.9
	Women - 1977	1331	24.32	0.03	1.25	0.02	5.14	29.8	8.9
112	Instep Length								
	Men - 1946	24,475	19.33	0.00	1.12	0.00	5.79	24.5	10.5
	Men - 1966	6682	19.64	0.01	1.05	0.01	5.32	24.5	8.3
	Men (Trainees) - 1966	2639	19.66	0.02	1.00	0.01	5.11	23.5	7.1
	Men (Trainees) - 1977	286	19.71	0.07	1.18	0.05	5.98	23.0	6.2
	Women - 1946	1883	17.73	0.02	0.90	0.01	5.08	20.7	5.9
	Women - 1977	1331	17.85	0.03	0.99	0.02	5.52	21.5	6.5
113	Foot Breadth								
	Men - 1946	24,466	9.82	0.00	0.63	0.00	6.42	13.0	6.5
	Men - 1966	6682	9.84	0.01	0.55	0.00	5.56	12.2	4.2
	Men (Trainees) - 1966	2639	9.92	0.01	0.54	0.01	5.48	11.9	3.7
	Men (Trainees) - 1977	286	9.92	0.03	0.56	0.02	5.67	11.5	3.4
	Women - 1946	3324	9.05	0.01	0.57	0.01	6.27	11.2	3.9
	Women - 1977	1331	8.87	0.01	0.52	0.01	5.81	10.8	3.3
114	Heel Breadth								
	Men - 1946	24,341	6.70	0.00	0.53	0.00	7.91	10.0	6.0
	Men - 1966	6682	6.86	0.01	0.47	0.00	6.84	9.0	4.0
	Men (Trainees) - 1966	2639	6.84	0.01	0.45	0.01	6.56	9.0	3.8
	Women - 1946	3319	5.94	0.01	0.44	0.01	7.39	7.9	3.4
	Women - 1977	1331	6.09	0.01	0.41	0.01	6.75	7.6	2.6

TABLE 25b. PERCENTILE VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	Percentiles in Centimeters											
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th	99th (1st-99th)	
FOOT MEASUREMENTS													
111	Foot Length												
	Men - 1946	23.6	24.0	24.5	24.9	25.7	26.5	27.4	28.1	28.6	29.0	29.3	5.7
	Men - 1966	23.8	24.2	24.7	25.1	25.9	26.7	27.6	28.4	29.0	29.6	30.0	6.2
	Men (Trainees) - 1966	24.0	24.3	24.8	25.2	26.0	26.8	27.7	28.4	29.0	29.6	30.1	6.1
	Men (Trainees) - 1977			24.5	25.0	25.9	26.8	27.7	28.5	28.9			
	Women - 1946	21.5	21.8	22.2	22.6	23.2	23.9	24.6	25.4	25.8	26.4	26.7	5.2
	Women - 1977	21.6	21.9	22.3	22.8	23.4	24.3	25.1	26.0	26.5	27.1	27.5	5.9
112	Instep Length												
	Men - 1946	16.6	17.0	17.5	17.9	18.6	19.4	20.1	20.8	21.2	21.7	22.0	5.4
	Men - 1966	17.2	17.5	17.9	18.3	18.9	19.6	20.3	21.0	21.4	21.9	22.3	5.1
	Men (Trainees) - 1966	17.3	17.6	18.0	18.4	19.0	19.6	20.3	20.9	21.3	21.8	22.2	4.9
	Men (Trainees) - 1977			17.7	18.2	18.9	19.7	20.5	21.2	21.7			
	Women - 1946	15.6	15.9	16.3	16.6	17.1	17.7	18.3	18.9	19.2	19.6	19.9	4.3
	Women - 1977	15.7	15.9	16.3	16.6	17.2	17.8	18.5	19.1	19.6	20.0	20.4	4.7
113	Foot Breadth												
	Men - 1946	8.3	8.5	8.8	9.0	9.4	9.8	10.2	10.6	10.8	11.1	11.3	3.0
	Men - 1966	8.6	8.8	9.0	9.2	9.5	9.8	10.2	10.6	10.8	11.0	11.2	2.6
	Men (Trainees) - 1966	8.8	8.9	9.1	9.2	9.6	9.9	10.3	10.6	10.8	11.1	11.3	2.5
	Men (Trainees) - 1977			9.0	9.2	9.6	9.9	10.3	10.7	10.9			
	Women - 1946	7.8	7.9	8.2	8.3	8.7	9.0	9.4	9.8	10.0	10.3	10.4	2.6
	Women - 1977	7.7	7.8	8.0	8.2	8.5	8.8	9.2	9.5	9.7	10.0	10.2	2.5
114	Heel Breadth												
	Men - 1946	5.4	5.6	5.8	6.0	6.3	6.7	7.1	7.4	7.6	8.0	8.2	2.8
	Men - 1966	5.9	6.0	6.2	6.3	6.5	6.8	7.2	7.5	7.7	7.9	8.1	2.2
	Men (Trainees) - 1966	5.9	6.0	6.2	6.3	6.5	6.8	7.1	7.4	7.6	7.8	8.0	2.1
	Women - 1946	5.0	5.1	5.3	5.4	5.6	5.9	6.2	6.5	6.7	7.0	7.1	2.1
	Women - 1977	5.2	5.3	5.5	5.6	5.8	6.1	6.4	6.6	6.8	7.0	7.2	2.0

TABLE 25a. STATISTICAL VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	N	Values in Centimeters						Range		Stature ratio
			Mean	SE(M)	S.D.	SE(SD)	V(%)	Min.	Max.	Total	
FOOT MEASUREMENTS (continued)											
115	Ball of Foot Circumference										
	Men - 1946	24,468	24.63	0.00	1.28	0.00	5.20	20.0	30.0	10.0	.142
	Men - 1966	6682	25.02	0.02	1.48	0.01	5.92	18.6	31.4	12.8	.143
	Men (Trainees) - 1966	2639	25.18	0.03	1.42	0.02	5.65	19.8	30.2	10.4	.144
	Men (Trainees) - 1977	287	25.15	0.08	1.29	0.05	5.11	21.5	28.5	7.0	.144
	Women - 1946	8108	21.89	0.01	1.15	0.01	5.24	18.5	26.3	7.8	.135
	Women - 1977	1331	22.61	0.03	1.14	0.02	5.06	19.5	27.2	7.7	.139
116	Instep Circumference										
	Men - 1966	6682	26.56	0.02	1.65	0.01	6.21	20.4	36.0	15.6	.152
	Men (Trainees) - 1966	2639	26.83	0.03	1.65	0.02	6.13	20.8	32.4	11.6	.154
	Women - 1977	1331	23.48	0.03	1.26	0.02	5.38	20.1	27.7	7.6	.144
117	Heel-Ankle Circumference										
	Men - 1966	6682	34.11	0.02	1.66	0.01	4.86	28.2	40.7	12.5	.195
	Men (Trainees) - 1966	2639	34.08	0.03	1.63	0.02	4.78	28.8	40.4	11.6	.195
	Men (Trainees) - 1977	287	34.02	0.10	1.74	0.07	5.13	28.5	39.0	10.5	.195
	Women - 1977	1331	30.79	0.04	1.46	0.03	4.73	26.8	36.1	9.3	.189
118	Sphyrion Height										
	Men (Trainees) - 1977	286	7.38	0.04	0.61	0.03	8.31	5.5	9.4	3.9	.042
	Women - 1977	1331	6.46	0.01	0.54	0.01	8.40	4.6	8.4	3.8	.040

TABLE 25b. PERCENTILE VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	Percentiles in Centimeters										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		99th
FOOT MEASUREMENTS (continued)													
115	Ball of Foot Circumference												
	Men - 1946	21.7	22.0	22.6	23.0	23.8	24.6	25.5	26.3	26.8	27.4	27.7	6.0
	Men - 1966	21.3	21.8	22.5	23.1	24.1	25.1	26.0	26.9	27.4	28.0	28.4	7.1
	Men (Trainees) - 1966	21.6	22.1	22.8	23.4	24.2	25.2	26.1	27.0	27.5	28.1	28.4	6.8
	Men (Trainees) - 1977			23.2	23.6	24.3	25.1	26.0	26.9	27.4			
	Women - 1946	19.4	19.7	20.1	20.5	21.1	21.8	22.6	23.4	23.9	24.4	24.8	5.4
	Women - 1977	20.1	20.4	20.8	21.1	21.8	22.6	23.4	24.1	24.5	25.1	25.6	5.5
116	Instep Circumference												
	Men - 1966	22.8	23.3	24.0	24.5	25.4	26.5	27.6	28.7	29.4	30.1	30.6	7.8
	Men (Trainees) - 1966	23.1	23.5	24.1	24.7	25.7	26.8	27.9	29.0	29.6	30.3	30.7	7.6
	Women - 1977	20.8	21.1	21.5	21.9	22.6	23.4	24.3	25.1	25.7	26.3	26.8	6.0
117	Heel-Ankle Circumference												
	Men - 1966	30.3	30.8	31.4	32.0	33.0	34.1	35.2	36.3	36.9	37.7	38.2	7.9
	Men (Trainees) - 1966	30.3	30.8	31.4	32.0	33.0	34.0	35.1	36.2	36.8	37.6	38.1	7.8
	Men (Trainees) - 1977			31.3	31.9	32.9	33.9	35.2	36.4	37.0			
	Women - 1977	27.7	28.0	28.5	29.0	29.8	30.7	31.7	32.7	33.3	34.0	34.6	6.9
118	Sphyrion Height												
	Men (Trainees) - 1977			6.4	6.6	7.0	7.4	7.8	8.2	8.4			
	Women - 1977	5.2	5.3	5.6	5.8	6.1	6.5	6.8	7.1	7.3	7.6	7.7	2.5

TABLE 25a. STATISTICAL VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

	N	Mean	SE(M)	S.D.	SE(SD)	V(%)	Range	
							Min.	Max.
Age (years)								
Men - 1946	24,502	24.28	0.03	4.94	0.02	20.35	15.0	57.0
Men - 1966	6682	22.17	0.06	4.64	0.04	20.92	17.0	55.0
Men (Trainees) - 1966	2639	20.18	0.03	1.48	0.02	7.35	17.0	31.0
Men (Trainees) - 1977	287	19.66	0.14	2.29	0.10	11.65	16.0	30.0
Women - 1946	8118	27.30	0.06	5.57	0.04	20.40	16.0	52.0
Women - 1977	1331	23.10	0.15	5.40	0.13	23.38	17.0	60.0
								43.0

TABLE 25b. PERCENTILE VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

Age (years)	Percentiles in Years										Range	
	1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th	99th (1st-99th)	
Men - 1946	17.4	17.7	18.6	19.1	19.6	20.6	23.0	27.4	31.5	37.7	43.0	25.6
Men - 1966	17.0	17.5	18.1	18.6	19.2	20.0	20.9	22.1	23.0	24.3	25.3	8.3
Men (Trainees) - 1966			17.2	17.4	18.0	19.0	20.7	23.2	24.0			
Men (Trainees) - 1977	21.1	22.0	22.7	23.0	23.7	25.9	30.2	35.8	39.7	44.3	47.2	26.1
Women - 1946	17.2	17.4	17.7	18.0	19.1	22.0	25.1	29.3	33.6	40.0	45.7	28.5
Women - 1977												

d. Tables of Statistical and Percentile Values in Inches

In the following tables, anthropometric data on U. S. Army men and women are given in inches for a total of 118 body measurements, together with age. The standard format adopted here for presentation of these data consists of tables on two facing pages. On the first or upper page (Table 26a), the statistical values are given, while on the second or lower facing page (Table 26b), the percentile values are shown. In this way, all of the data for both statistical values and percentile values for any body measurement may be found on the two facing pages.

The statistical and percentile values shown in these tables are the same as those given in the source tables of data in a previous section (see page 18). However due to the small size of the sample (287 men), only selected percentile values between the 5th and the 95th percentiles are given for the 1977 U. S. Army basic trainees.

Values are expressed in inches for all of the body measurements, while weight is shown in pounds and age is given in years.

e. Index of Body Measurements in Inches

	Pages	
	Statistics	Percentiles
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TABLE 26a. STATISTICAL VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977

No.	Measurements	Values in Inches							Stature ratio
		N	Mean	SE(M)	S.D.	SE(SD)	V(%)	Range Min. Max.	
1	Weight (pounds)								
	Men - 1946	24,506	154.81	0.13	20.56	0.09	13.28	95.0 305.0	210.0
	Men - 1966	6677	159.10	0.29	23.35	0.20	14.68	99.5 283.5	184.0
	Men (Trainees) - 1966	2638	155.97	0.45	23.09	0.32	14.81	99.5 255.5	156.0
	Men (Trainees) - 1977	287	156.02	1.43	24.22	0.01	15.52	102.5 233.8	131.3
	Women - 1946	8107	131.47	0.22	19.85	0.16	15.10	86.0 246.0	160.0
2	Stature								
	Men - 1946	24,508	68.47	0.02	2.52	0.01	3.68	59.1 78.7	19.6
	Men - 1966	6682	68.71	0.03	2.60	0.02	3.79	59.7 78.6	18.9
	Men (Trainees) - 1966	2639	68.78	0.05	2.54	0.03	2.69	60.1 77.4	17.3
	Men (Trainees) - 1977	287	68.53	0.16	2.68	0.11	3.91	60.2 77.7	17.5
	Women - 1946	8121	63.84	0.03	2.36	0.02	3.71	55.5 72.4	16.9
3	Cervicale Height								
	Men - 1946	21,141	58.74	0.02	2.38	0.01	4.05	50.0 68.9	18.9
	Men - 1966	6682	58.88	0.03	2.50	0.02	4.24	50.3 68.4	18.1
	Men (Trainees) - 1966	2639	58.84	0.05	2.43	0.03	4.13	50.3 67.6	17.3
	Women - 1946	8121	54.43	0.02	2.22	0.02	4.09	47.6 62.6	15.0
	Women - 1977	255	55.23	0.15	2.37	0.10	4.29	49.7 63.7	14.0
4	Shoulder (Acromiale) Height								
	Men - 1966	6682	56.58	0.03	2.45	0.02	4.33	48.5 65.8	17.3
	Men (Trainees) - 1966	2639	56.56	0.05	2.39	0.03	4.22	48.9 64.3	15.4
	Women - 1946	8118	52.79	0.02	2.17	0.02	4.12	45.3 61.8	16.5
	Women - 1977	1331	52.56	0.06	2.36	0.05	4.49	45.6 61.1	15.5
									.858
192									

STANDING MEASUREMENTS

TABLE 26b. PERCENTILE VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977

No.	Measurements	Percentiles in Inches										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		99th
1	Weight (pounds)												
	Men - 1946	114.4	118.0	124.3	130.0	141.0	152.9	167.0	181.0	191.7	205.0	214.9	100.5
	Men - 1966	116.0	120.1	126.3	132.1	142.6	156.3	172.6	190.1	201.9	216.5	226.9	110.9
	Men (Trainees) - 1966	111.9	117.0	123.7	129.4	139.4	153.0	169.8	187.6	199.0	212.0	220.4	108.5
	Men (Trainees) - 1977			122.4	130.1	138.1	151.3	172.6	192.7	200.2			
	Women - 1946	97.0	99.9	104.4	108.8	117.2	128.6	142.7	158.1	168.6	181.6	191.0	94.0
2	Women - 1977	94.2	97.1	102.8	108.7	119.3	131.4	143.6	155.8	164.3	175.7	184.8	90.6
	STANDING MEASUREMENTS												
	Stature												
	Men - 1946	62.7	63.3	64.3	65.3	66.8	68.5	70.2	71.8	72.6	73.7	74.5	11.8
	Men - 1966	62.6	63.4	64.5	65.4	67.0	68.7	70.4	72.1	73.1	74.2	74.9	12.3
	Men (Trainees) - 1966	62.9	63.6	64.6	65.6	67.1	68.7	70.5	72.1	73.0	74.2	74.9	12.0
3	Men (Trainees) - 1977			64.1	65.2	66.8	68.5	70.2	71.9	73.0			
	Women - 1946	58.5	59.1	60.0	60.8	62.2	63.8	65.4	66.9	67.8	68.8	69.5	11.0
	Women - 1977	58.3	59.0	60.1	60.9	62.4	64.1	65.9	67.6	68.5	69.6	70.2	11.9
	Cervicale Height												
	Men - 1946	53.2	53.8	54.8	55.7	57.1	58.7	60.3	61.8	62.7	63.7	64.4	11.2
	Men - 1966	52.9	53.7	54.8	55.8	57.2	58.8	60.6	62.1	63.0	64.0	64.6	11.7
4	Men (Trainees) - 1966	53.1	53.8	54.9	55.8	57.2	58.8	60.5	62.0	62.9	63.8	64.4	11.3
	Women - 1946	49.4	50.0	50.8	51.6	52.9	54.4	55.9	57.3	58.2	59.1	59.8	10.4
	Women - 1977	50.0	50.3	51.2	52.1	53.7	55.3	56.7	58.0	59.0	60.4	61.8	11.8
	Shoulder (Acromiale) Height												
	Men - 1966	50.9	51.6	52.6	53.5	54.9	56.6	58.2	59.8	60.7	61.7	62.4	11.5
	Men (Trainees) - 1966	51.1	51.7	52.6	53.5	54.9	56.5	58.2	59.6	60.5	61.6	62.3	11.2
5	Women - 1946	47.9	48.5	49.3	50.0	51.3	52.7	54.2	55.6	56.4	57.4	58.1	10.2
	Women - 1977	47.4	48.0	48.8	49.5	50.9	52.5	54.2	55.7	56.6	57.5	58.1	10.7

STANDING MEASUREMENTS

TABLE 25a. STATISTICAL VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	N	Mean	SE(M)	S.D.	Values in Inches			V(%)	Range		Stature ratio
						SE(SD)	Min.	Max.		Min.	Max.	
STANDING MEASUREMENTS (continued)												
5	Axilla Height											
	Men (Trainees) - 1977	287	51.67	0.14	2.32	0.10	44.6	58.9	4.49	44.3	14.3	.754
	Women - 1977	1331	48.52	0.06	2.20	0.04	41.1	55.9	4.53	41.8	14.8	.756
6	Suprasternale Height											
	Men (Trainees) - 1977	287	56.18	0.14	2.40	0.10	49.1	64.1	4.27	49.1	15.0	.820
	Women - 1977	255	52.21	0.14	2.22	0.10	47.0	59.9	4.25	47.0	12.9	.814
7	Chest/Bustpoint Height											
	Men (Trainees) - 1977	287	50.17	0.13	2.23	0.09	43.4	57.7	4.44	43.3	14.3	.732
	Women - 1977	1331	46.57	0.06	2.22	0.04	38.9	53.5	4.77	38.9	14.6	.726
8	Substernale Height											
	Men (Trainees) - 1977	287	48.25	0.13	2.16	0.09	40.9	55.2	4.48	40.9	14.3	.704
	Women - 1977	255	44.85	0.12	1.96	0.09	40.0	51.4	4.37	40.0	11.4	.699
9	Elbow (Radiale) Height											
	Men (Trainees) - 1977	287	43.07	0.12	1.99	0.08	37.2	49.8	4.62	37.2	12.6	.628
	Women - 1977	255	40.38	0.12	1.89	0.08	35.4	46.8	4.68	35.4	11.4	.629
10	Knuckle Height (Metacarpale III)											
	Men (Trainees) - 1977	287	29.73	0.10	1.62	0.07	24.6	35.2	5.45	24.6	10.6	.434
	Women - 1977	255	27.95	0.10	1.56	0.07	23.1	32.9	5.58	23.1	9.8	.436
11	Waist Height											
	Men - 1946	24,469	41.56	0.01	1.96	0.01	32.7	50.0	4.72	32.7	17.3	.607
	Men - 1966	6682	41.86	0.03	2.11	0.02	34.0	49.7	5.05	34.0	15.7	.609
	Men (Trainees) - 1966	2639	41.99	0.04	2.02	0.03	34.7	49.3	4.82	34.7	14.6	.610
	Men (Trainees) - 1977	287	41.52	0.12	2.07	0.09	35.2	47.2	4.99	35.2	12.0	.606
	Women - 1946	8121	40.34	0.02	1.80	0.01	34.3	48.0	4.48	34.3	13.7	.632
	Women - 1977	1331	39.92	0.06	2.05	0.04	33.4	47.6	5.14	33.4	14.2	.622

TABLE 26b. PERCENTILE VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	Percentiles in Inches										Range 99th (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		
STANDING MEASUREMENTS (continued)													
5	Axilla Height												
	Men (Trainees) - 1977			47.8	48.8	50.2	51.7	53.2	54.6	55.5			
	Women - 1977	43.6	44.2	45.0	45.7	47.0	48.5	50.0	51.4	52.3	53.1	53.6	10.0
6	Suprasternale Height												
	Men (Trainees) - 1977			52.2	53.2	54.6	56.2	57.8	59.2	60.1			
	Women - 1977	47.5	47.9	48.6	49.3	50.7	52.2	53.7	55.0	55.9	57.0	58.0	10.5
7	Chest/Bustpoint Height												
	Men (Trainees) - 1977			46.4	47.3	48.7	50.2	51.7	53.0	53.7			
	Women - 1977	41.8	42.2	43.0	43.8	45.0	46.5	48.1	49.5	50.3	51.2	51.8	10.0
8	Substernale Height												
	Men (Trainees) - 1977			44.7	45.5	46.9	48.3	49.7	51.0	51.8			
	Women - 1977	40.7	41.0	41.7	42.4	43.5	44.8	46.1	47.3	48.1	49.2	50.0	9.3
9	Elbow (Radiale) Height												
	Men (Trainees) - 1977			39.8	40.6	41.8	43.1	44.4	45.6	46.4			
	Women - 1977	36.6	36.9	37.4	37.9	39.0	40.3	41.7	42.9	43.6	44.4	44.9	8.3
10	Knuckle Height (Metacarpale III)												
	Men (Trainees) - 1977			27.1	27.7	28.7	29.7	30.8	31.8	32.4			
	Women - 1977	24.4	24.8	25.4	26.0	26.9	27.9	29.0	30.0	30.5	31.0	31.3	6.9
11	Waist Height												
	Men - 1946	37.1	37.5	38.3	39.0	40.2	41.5	42.9	44.0	44.8	45.7	46.3	9.2
	Men - 1966	36.8	37.4	38.4	39.2	40.5	41.9	43.3	44.5	45.3	46.3	46.9	10.1
	Men (Trainees) - 1966	37.4	37.9	38.6	39.4	40.6	42.0	43.3	44.6	45.4	46.3	46.9	9.5
	Men (Trainees) - 1977			38.0	38.9	40.2	41.5	42.9	44.2	45.0			
	Women - 1946	36.3	36.7	37.4	38.1	39.1	40.3	41.5	42.6	43.4	44.2	44.8	8.5
	Women - 1977	35.3	35.9	36.7	37.4	38.5	39.8	41.2	42.6	43.4	44.4	45.0	9.7

TABLE 26a. STATISTICAL VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	N	Mean	SE(M)	S.D.	SE(SD)	V(%)	Range		Stature ratio
								Min.	Max.	
STANDING MEASUREMENTS (continued)										
12	Crotch Height									
	Men - 1946	24,497	32.84	0.01	1.75	0.01	5.33	25.6	39.8	14.2
	Men - 1966	6682	33.05	0.02	1.84	0.02	5.57	25.5	40.0	14.5
	Men (Trainees) - 1966	2639	33.23	0.04	1.80	0.02	5.41	25.9	39.7	13.8
	Women - 1946	8113	28.67	0.02	1.59	0.01	5.57	22.8	35.0	12.2
	Women - 1977	1331	30.07	0.05	1.72	0.03	5.72	24.6	36.2	11.6
13	Hip (Trochanteric) Height									
	Women - 1946	8120	32.17	0.02	1.69	0.01	5.28	26.4	39.4	12.0
	Women - 1977	255	33.82	0.11	1.74	0.08	5.14	29.9	40.1	10.2
14	Buttock Height									
	Men (Trainees) - 1977	287	35.20	0.12	2.00	0.08	5.68	29.7	41.5	11.8
	Women - 1977	1331	32.99	0.05	1.84	0.04	5.58	27.7	40.7	13.0
15	Gluteal Furrow Height									
	Men (Trainees) - 1977	287	31.64	0.10	1.74	0.07	5.50	26.0	37.2	11.2
	Women - 1977	255	29.18	0.10	1.60	0.07	5.48	24.5	34.6	10.1
16	Kneecap (Patella) Height									
	Men - 1966	6682	20.81	0.02	1.28	0.01	6.14	16.8	25.3	8.5
	Men (Trainees) - 1966	2639	20.87	0.02	1.24	0.02	5.93	16.8	25.3	8.5
	Women - 1977	1331	18.86	0.03	1.04	0.02	5.51	15.5	22.9	7.4
17	Tibiale Height									
	Men - 1946	24,664	17.94	0.01	1.12	0.00	6.24	14.0	23.4	9.4
	Men (Trainees) - 1977	283	19.02	0.06	1.09	0.04	5.73	15.9	22.0	6.1
	Women - 1977	255	17.34	0.06	0.97	0.04	5.59	14.6	20.4	5.8

TABLE 26b. PERCENTILE VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	Percentiles in Inches										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		99th
STANDING MEASUREMENTS (continued)													
12	Crotch Height												
	Men - 1946	28.8	29.3	30.0	30.6	31.7	32.8	34.0	35.1	35.8	36.6	37.2	8.4
	Men - 1966	28.6	29.2	30.0	30.7	31.8	33.0	34.3	35.4	36.1	36.9	37.4	8.8
	Men (Trainees) - 1966	29.0	29.5	30.3	31.0	32.0	33.2	34.4	35.6	36.2	37.0	37.5	8.5
	Women - 1946	24.9	25.4	26.1	26.7	27.6	28.6	29.7	30.7	31.3	32.0	32.6	7.7
	Women - 1977	26.3	26.7	27.4	27.9	28.8	30.0	31.2	32.4	33.0	33.8	34.2	7.9
13	Hip (Trochanteric) Height												
	Women - 1946	28.4	28.8	29.5	30.0	31.0	32.1	33.3	34.3	35.0	35.8	36.4	8.0
	Women - 1977	30.3	30.5	31.0	31.5	32.6	33.8	35.0	36.0	36.7	37.4	38.0	7.7
14	Buttock Height												
	Men (Trainees) - 1977	29.1	29.5	31.8	32.6	33.9	35.3	36.5	37.7	38.4	37.1	37.8	8.7
	Women - 1977			30.1	30.6	31.7	32.9	34.2	35.4	36.1			
15	Gluteal Furrow Height												
	Men (Trainees) - 1977	25.8	26.2	28.8	29.4	30.5	31.6	32.8	33.9	34.5	32.7	33.3	7.5
	Women - 1977			26.7	27.2	28.1	29.1	30.2	31.2	31.9			
16	Kneecap (Patella) Height												
	Men - 1966	17.9	18.2	18.8	19.2	19.9	20.8	21.7	22.5	23.0	23.5	23.9	6.0
	Men (Trainees) - 1966	18.1	18.4	18.8	19.3	20.0	20.8	21.7	22.5	22.9	23.5	23.8	5.7
	Women - 1977	16.6	16.8	17.2	17.6	18.1	18.8	19.6	20.3	20.7	21.1	21.3	4.7
17	Tibiale Height												
	Men - 1946	15.4	15.7	16.2	16.5	17.2	17.9	18.7	19.4	19.9	20.4	20.8	5.4
	Men (Trainees) - 1977			17.1	17.6	18.3	19.0	19.7	20.4	20.8			
	Women - 1977	15.2	15.4	15.7	16.1	16.7	17.3	18.0	18.6	19.0	19.5	19.9	4.7

TABLE 26a. STATISTICAL VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	N	Mean	SE(M)	S.D.	SE(SD)	V(%)	Range		Stature ratio
								Min.	Max.	
STANDING MEASUREMENTS (continued)										
18	Calf Height									
	Men - 1966	6682	13.94	0.01	1.06	0.01	7.62	9.4	18.8	.203
	Men (Trainees) - 1966	2639	13.96	0.02	1.00	0.01	7.14	9.4	17.6	.203
	Women - 1977	1331	12.81	0.02	0.91	0.02	7.10	10.0	15.9	.200
19	Acromion-Radiale Length									
	Men - 1946	24,348	13.13	0.00	0.75	0.00	5.71	9.2	15.9	.192
	Men (Trainees) - 1977	287	13.28	0.04	0.72	0.03	5.42	11.0	15.5	.194
	Women - 1977	255	12.14	0.04	0.66	0.03	5.44	10.5	14.6	.189
20	Radiale-Stylelion Length									
	Men (Trainees) - 1977	287	10.57	0.04	0.62	0.03	5.87	8.5	12.4	.154
	Women - 1977	255	9.60	0.04	0.58	0.03	6.04	8.3	11.8	.150
SITTING MEASUREMENTS										
21	Sitting Height									
	Men - 1946	24,352	35.78	0.01	1.34	0.01	3.74	30.3	41.3	.522
	Men - 1966	6682	35.70	0.02	1.44	0.01	4.04	30.4	40.6	.520
	Men (Trainees) - 1966	2639	35.91	0.03	1.35	0.02	3.77	31.2	40.6	.522
	Men (Trainees) - 1977	287	35.17	0.08	1.43	0.06	4.07	30.7	39.4	.513
	Women - 1946	8119	32.94	0.01	1.26	0.01	3.83	28.0	38.2	.516
	Women - 1977	1331	33.49	0.04	1.41	0.03	4.21	28.8	37.9	.521
22	Eye Height, Sitting									
	Men - 1966	6682	30.99	0.02	1.41	0.01	4.53	25.9	36.5	.451
	Men (Trainees) - 1966	2639	31.15	0.03	1.34	0.02	4.29	26.3	35.7	.453
	Men (Trainees) - 1977	287	30.48	0.08	1.34	0.06	4.40	26.3	34.1	.445
	Women - 1977	1331	28.99	0.04	1.36	0.03	4.69	24.6	33.1	.452

TABLE 26b. PERCENTILE VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	Percentiles in Inches										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		99th
STANDING MEASUREMENTS (continued)													
18	Calf Height												
	Men - 1966	11.5	11.8	12.2	12.6	13.2	13.9	14.6	15.3	15.7	16.2	16.5	5.0
	Men (Trainees) - 1966	11.8	12.0	12.4	12.7	13.3	13.9	14.6	15.3	15.7	16.1	16.4	4.6
	Women - 1977	10.9	11.1	11.4	11.7	12.2	12.8	13.4	14.0	14.4	14.8	15.1	4.2
19	Acromion-Radiale Length												
	Men - 1946	11.4	11.6	11.9	12.1	12.6	13.1	13.6	14.1	14.4	14.7	14.9	3.5
	Men (Trainees) - 1977	10.7	10.8	11.1	11.3	11.7	12.2	12.6	12.9	13.2	13.5	13.8	3.1
20	Radiale-Styilion Length												
	Men (Trainees) - 1977	8.4	8.5	9.6	9.8	10.2	10.5	11.0	11.4	11.7	10.9	11.0	2.6
	Women - 1977			8.7	8.9	9.2	9.6	10.0	10.4	10.6			
SITTING MEASUREMENTS													
21	Sitting Height												
	Men - 1946	32.5	32.9	33.5	34.0	34.8	35.8	36.7	37.5	38.0	38.6	39.0	6.5
	Men - 1966	32.3	32.7	33.3	33.8	34.7	35.7	36.7	37.6	38.1	38.6	39.0	6.7
	Men (Trainees) - 1966	32.6	33.0	33.6	34.2	35.0	35.9	36.8	37.6	38.2	38.7	39.1	6.5
	Men (Trainees) - 1977			32.9	33.4	34.3	35.2	36.1	37.0	37.6			
	Women - 1946	30.0	30.4	30.9	31.3	32.1	32.9	33.8	34.6	35.0	35.5	35.9	5.9
	Women - 1977	30.0	30.5	31.1	31.7	32.6	33.5	34.5	35.3	35.8	36.2	36.5	6.5
22	Eye Height, Sitting												
	Men - 1966	27.6	28.0	28.6	29.2	30.1	31.0	32.0	32.8	33.3	33.9	34.3	6.7
	Men (Trainees) - 1966	28.0	28.4	28.9	29.4	30.3	31.2	32.1	32.9	33.4	33.9	34.3	6.3
	Men (Trainees) - 1977			28.3	28.9	29.6	30.4	31.3	32.2	32.8			
	Women - 1977	25.7	26.1	26.6	27.2	28.1	29.0	29.9	30.7	31.2	31.7	32.1	6.4

TABLE 26a. STATISTICAL VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	N	Mean	SE(M)	Values in Inches				Stature ratio
					S.D.	SE(SD)	V(%)	Range Min. Max.	
SITTING MEASUREMENTS (continued)									
23	Mid-Shoulder Height, Sitting								
	Men - 1966	6682	24.56	0.02	1.25	0.01	5.09	20.0 28.8	8.8 .357
	Men (Trainees) - 1966	2639	24.68	0.02	1.16	0.02	4.68	20.6 28.8	8.2 .359
	Men (Trainees) - 1977	287	24.17	0.07	1.19	0.05	4.92	20.8 27.2	6.4 .353
24	Trunk Height, Sitting								
	Men - 1946	24,715	23.01	0.01	1.17	0.01	5.08	17.7 27.2	9.5 .336
	Women - 1946	8119	21.11	0.01	1.07	0.01	5.11	16.9 24.8	7.9 .331
25	Shoulder-Elbow Length								
	Men - 1946	24,556	14.28	0.01	0.81	0.00	5.67	9.8 19.3	9.5 .208
	Men - 1966	6682	14.52	0.01	0.73	0.01	5.05	11.7 17.2	5.5 .211
	Men (Trainees) - 1966	2639	14.48	0.01	0.71	0.01	4.92	12.2 17.1	4.9 .210
	Men (Trainees) - 1977	287	14.30	0.04	0.73	0.03	5.10	12.3 16.5	4.2 .209
	Women - 1946	8119	13.07	0.01	0.72	0.01	5.62	9.8 16.1	6.3 .205
	Women - 1977	1331	13.21	0.02	0.69	0.01	5.22	10.7 15.8	5.1 .206
26	Elbow-Grip Length								
	Men (Trainees) - 1977	287	13.77	0.05	0.77	0.03	5.59	11.1 16.1	5.0 .201
	Women - 1977	255	12.70	0.04	0.69	0.03	5.43	10.9 14.8	3.9 .198
27	Elbow-Fingertip Length								
	Men - 1946	24,354	18.73	0.01	0.88	0.00	4.70	14.8 23.4	8.6 .274
	Men - 1966	6682	18.88	0.01	0.91	0.01	4.81	15.4 22.7	7.3 .275
	Men (Trainees) - 1966	2639	18.87	0.02	0.86	0.01	4.57	15.9 22.2	6.3 .274
	Men (Trainees) - 1977	287	18.81	0.06	0.97	0.04	5.16	15.7 21.5	5.8 .274
	Women - 1946	8118	16.68	0.01	0.82	0.01	4.97	13.0 20.5	7.5 .261
	Women - 1977	1331	17.13	0.02	0.90	0.02	5.25	14.6 20.1	5.5 .267

TABLE 26b. PERCENTILE VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	Percentiles in Inches										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		99th
SITTING MEASUREMENTS (continued)													
23	Mid-Shoulder Height, Sitting												
	Men - 1966	21.5	21.9	22.5	23.0	23.7	24.6	25.4	26.2	26.6	27.1	27.4	5.9
	Men (Trainees) - 1966	22.0	22.3	22.8	23.2	23.9	24.7	25.4	26.2	26.6	27.1	27.4	5.4
	Men (Trainees) - 1977			22.3	22.7	23.4	24.1	25.0	25.7	26.2			
24	Trunk Height, Sitting												
	Men - 1946	20.1	20.4	21.0	21.4	22.2	23.0	23.8	24.5	25.0	25.5	25.8	5.7
	Women - 1946	18.7	19.0	19.4	19.7	20.4	21.1	21.8	22.5	22.9	23.3	23.6	4.9
25	Shoulder-Elbow Length												
	Men - 1946	12.3	12.5	12.9	13.2	13.7	14.3	14.8	15.3	15.6	16.0	16.3	4.0
	Men - 1966	12.8	13.0	13.3	13.6	14.0	14.5	15.0	15.5	15.7	16.1	16.3	3.5
	Men (Trainees) - 1966	12.9	13.0	13.3	13.6	14.0	14.5	15.0	15.4	15.6	16.0	16.2	3.3
	Men (Trainees) - 1977			13.1	13.4	13.8	14.3	14.8	15.2	15.5			
	Women - 1946	11.3	11.6	11.9	12.2	12.6	13.1	13.5	14.0	14.3	14.6	14.8	3.5
	Women - 1977	11.7	11.9	12.1	12.4	12.7	13.2	13.7	14.1	14.4	14.7	14.8	3.1
26	Elbow-Grip Length												
	Men (Trainees) - 1977			12.5	12.8	13.3	13.8	14.3	14.8	15.1			
	Women - 1977	11.2	11.4	11.6	11.9	12.2	12.6	13.1	13.6	13.9	14.3	14.5	3.3
27	Elbow-Fingertip Length												
	Men - 1946	16.6	16.9	17.3	17.6	18.1	18.7	19.3	19.8	20.1	20.5	20.8	4.2
	Men - 1966	16.8	17.1	17.4	17.8	18.3	18.8	19.5	20.1	20.4	20.9	21.2	4.4
	Men (Trainees) - 1966	16.9	17.1	17.5	17.8	18.3	18.9	19.4	20.0	20.3	20.7	21.0	4.1
	Men (Trainees) - 1977			17.3	17.7	18.2	18.8	19.4	20.1	20.5			
	Women - 1946	14.7	14.9	15.3	15.6	16.2	16.7	17.2	17.7	18.0	18.4	18.7	4.0
	Women - 1977	15.2	15.4	15.7	16.0	16.5	17.1	17.7	18.3	18.7	19.1	19.4	4.2

TABLE 26a. STATISTICAL VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	N	Values in Inches					Range		Stature ratio
			Mean	SE(M)	S.D.	SE(SD)	V(%)	Min.	Max.	
SITTING MEASUREMENTS (continued)										
28	Knee Height, Sitting									
	Men - 1946	24,419	21.62	0.01	1.09	0.00	5.04	15.4	27.2	11.8
	Men - 1966	6682	21.28	0.01	1.08	0.01	5.05	17.4	25.5	8.1
	Men (Trainees) - 1966	2639	21.27	0.02	1.04	0.01	4.87	18.2	25.3	7.1
	Men (Trainees) - 1977	287	21.69	0.07	1.19	0.05	5.49	18.3	24.9	6.6
	Women - 1946	8117	18.77	0.01	0.94	0.01	5.07	15.0	22.4	7.4
	Women - 1977	1331	20.08	0.03	1.03	0.02	5.13	17.1	23.9	6.8
29	Popliteal Height, Sitting									
	Men - 1966	6682	17.56	0.01	0.98	0.01	5.60	14.1	21.5	7.4
	Men (Trainees) - 1966	2639	17.64	0.02	0.98	0.01	5.56	14.4	21.0	6.6
	Men (Trainees) - 1977	287	17.43	0.06	1.07	0.04	6.14	14.6	20.5	5.9
	Women - 1977	1331	16.41	0.03	0.93	0.02	5.67	13.7	19.3	5.6
30	Buttock-Knee Length									
	Men - 1946	24,244	23.40	0.01	1.12	0.01	4.79	19.3	28.0	8.7
	Men - 1966	6682	23.41	0.01	1.12	0.01	4.80	19.6	28.0	8.4
	Men (Trainees) - 1966	2639	23.32	0.02	1.09	0.02	4.68	19.8	27.6	7.8
	Men (Trainees) - 1977	287	23.93	0.07	1.21	0.05	5.06	20.6	27.7	7.1
	Women - 1946	8117	22.36	0.01	1.16	0.01	5.23	17.7	26.4	8.7
	Women - 1977	1331	22.78	0.03	1.21	0.02	5.31	19.2	27.0	7.8
31	Buttock-Popliteal Length									
	Men - 1966	6682	19.62	0.01	0.99	0.01	5.02	16.2	23.1	6.9
	Men (Trainees) - 1966	2639	19.49	0.02	0.99	0.01	5.09	16.5	23.1	6.6

TABLE 26b. PERCENTILE VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	Percentiles in Inches										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		99th
SITTING MEASUREMENTS (continued)													
28	Knee Height, Sitting												
	Men - 1946	19.0	19.3	19.8	20.2	20.9	21.6	22.4	23.1	23.5	24.0	24.3	5.3
	Men - 1966	18.8	19.1	19.6	20.0	20.6	21.3	22.0	22.7	23.1	23.6	23.9	5.1
	Men (Trainees) - 1966	18.9	19.2	19.6	20.0	20.6	21.2	22.0	22.6	23.1	23.5	23.8	4.9
	Men (Trainees) - 1977			19.8	20.2	20.9	21.7	22.5	23.2	23.7			
	Women - 1946	16.6	16.8	17.2	17.6	18.1	18.8	19.4	20.0	20.3	20.8	21.1	4.5
	Women - 1977	17.9	18.1	18.5	18.8	19.4	20.0	20.8	21.4	21.8	22.3	22.6	4.7
29	Popliteal Height, Sitting												
	Men - 1966	15.3	15.6	16.0	16.3	16.9	17.5	18.2	18.8	19.2	19.6	19.9	4.6
	Men (Trainees) - 1966	15.4	15.7	16.0	16.4	16.9	17.6	18.3	18.9	19.3	19.7	19.9	4.5
	Men (Trainees) - 1977			15.6	16.1	16.7	17.4	18.1	18.8	19.2			
	Women - 1977	14.3	14.6	15.0	15.3	15.8	16.4	17.0	17.6	18.0	18.4	18.6	4.3
30	Buttock-Knee Length												
	Men - 1946	20.7	21.0	21.5	21.9	22.6	23.4	24.2	24.8	25.2	25.7	26.0	5.3
	Men - 1966	20.8	21.2	21.6	22.0	22.6	23.4	24.1	24.9	25.3	25.8	26.2	5.4
	Men (Trainees) - 1966	20.9	21.2	21.6	21.9	22.6	23.3	24.0	24.7	25.2	25.7	26.1	5.2
	Men (Trainees) - 1977			21.9	22.4	23.1	23.9	24.8	25.5	25.9			
	Women - 1946	19.7	20.0	20.5	20.9	21.6	22.4	23.1	23.8	24.3	24.9	25.3	5.6
	Women - 1977	20.1	20.4	20.9	21.3	21.9	22.7	23.6	24.4	24.9	25.4	25.7	5.6
31	Buttock-Popliteal Length												
	Men - 1966	17.3	17.6	18.0	18.4	19.0	19.6	20.3	20.9	21.3	21.7	22.0	4.7
	Men (Trainees) - 1966	17.2	17.5	17.9	18.2	18.8	19.5	20.2	20.8	21.2	21.6	21.9	4.7

TABLE 26a. STATISTICAL VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	N	Mean	SE(M)	S.D.	SE(SD)	V(%)	Range		Stature ratio
								Min.	Max.	
DEPTH AND BREADTH MEASUREMENTS										
32	Chest Depth									
	Men - 1946	24,558	8.33	0.00	0.75	0.00	9.00	5.3	12.8	7.5
	Men - 1966	6682	9.12	0.01	0.79	0.01	8.61	6.5	13.4	6.9
	Men (Trainees) - 1966	2639	8.96	0.01	0.74	0.01	8.24	6.6	11.8	5.2
	Men (Trainees) - 1977	287	8.54	0.05	0.79	0.03	9.25	6.9	10.7	3.8
	Women - 1946 ^a	8118	7.12	0.01	0.63	0.00	9.10	5.1	11.4	6.3
	Women - 1977 ^b	1331	9.02	0.02	0.88	0.02	9.76	6.1	13.1	7.0
33	Trunk/Waist Depth									
	Men - 1946 ^c	24,558	9.09	0.01	0.81	0.00	8.91	6.5	14.0	7.5
	Men (Trainees) - 1977 ^d	280	7.99	0.05	0.89	0.04	11.14	6.3	11.3	5.0
	Women - 1946 ^c	8114	7.57	0.01	0.94	0.01	12.69	4.7	13.4	8.7
	Women - 1977 ^d	1331	7.20	0.02	0.87	0.02	12.08	5.3	12.9	7.6
34	Shoulder (Bideloid) Breadth									
	Men - 1946	24,461	17.95	0.01	0.99	0.00	5.52	13.8	23.2	9.4
	Men - 1966	6682	17.86	0.01	1.00	0.01	5.59	14.3	23.1	8.8
	Men (Trainees) - 1966	2639	17.75	0.02	0.97	0.01	5.48	14.3	21.4	7.1
	Women - 1946	8120	15.58	0.01	1.01	0.01	6.54	12.2	22.0	9.8
	Women - 1977	1331	16.55	0.02	0.88	0.02	5.32	14.3	22.1	7.8
35	Biacromial Breadth									
	Men (Trainees) - 1977	287	15.53	0.05	0.78	0.03	5.02	13.2	17.7	4.5
	Women - 1977	255	14.06	0.04	0.63	0.03	4.48	12.0	15.6	3.6

^a Chest Depth above Bust^b Bust Depth at Bust^c Trunk Depth^d Waist Depth

TABLE 26b. PERCENTILE VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	Percentiles in Inches										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		99th
DEPTH AND BREADTH MEASUREMENTS													
32	Chest Depth												
	Men - 1946	6.8	6.9	7.2	7.4	7.8	8.3	8.8	9.3	9.6	10.1	10.5	3.7
	Men - 1966	7.6	7.7	8.0	8.2	8.6	9.1	9.6	10.1	10.5	11.0	11.4	3.8
	Men (Trainees) - 1966	7.4	7.6	7.8	8.0	8.4	8.9	9.4	9.9	10.3	10.7	11.0	3.6
	Men (Trainees) - 1977			7.5	7.6	7.9	8.4	9.0	9.7	10.1			
	Women - 1946 ^a	5.8	5.9	6.1	6.3	6.7	7.1	7.5	7.9	8.2	8.6	8.8	3.0
	Women - 1977 ^b	7.3	7.5	7.7	8.0	8.4	9.0	9.6	10.2	10.6	11.1	11.4	4.1
33	Trunk/Waist Depth												
	Men - 1946 ^c	7.5	7.6	7.9	8.1	8.5	9.0	9.5	10.1	10.5	11.1	11.5	4.0
	Men (Trainees) - 1977 ^d			6.9	7.0	7.3	7.8	8.5	9.3	9.8			
	Women - 1946 ^c	5.9	6.1	6.3	6.5	6.9	7.4	8.1	8.8	9.4	10.0	10.5	4.6
	Women - 1977 ^d	5.7	5.8	6.0	6.2	6.6	7.1	7.6	8.3	8.8	9.4	9.9	4.2
34	Shoulder (Bideloid) Breadth												
	Men - 1946	15.8	16.0	16.4	16.7	17.3	17.9	18.6	19.2	19.6	20.2	20.6	4.8
	Men - 1966	15.7	16.0	16.3	16.6	17.2	17.8	18.5	19.2	19.6	20.1	20.5	4.8
	Men (Trainees) - 1966	15.6	15.8	16.2	16.5	17.1	17.7	18.4	19.0	19.4	19.9	20.2	4.6
	Women - 1946	13.5	13.7	14.1	14.4	14.9	15.5	16.2	16.9	17.4	18.0	18.4	4.9
	Women - 1977	14.7	14.8	15.1	15.4	15.9	16.5	17.1	17.6	18.0	18.4	18.7	4.0
35	Biacromial Breadth												
	Men (Trainees) - 1977	12.7	12.8	13.0	13.2	13.6	14.1	14.5	14.9	15.1	15.4	15.6	2.9
	Women - 1977												

^aChest Depth above Bust^bBust Depth at Bust^cTrunk Depth^dWaist Depth

TABLE 26a. STATISTICAL VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	N	Mean	SE(M)	S.D.	SE(SD)	V(%)	Values in Inches			Stature ratio
								Min.	Range Max.	Total	
BREATH MEASUREMENTS (continued)											
36	Chest Breadth										
	Men - 1946	24,574	11.14	0.00	0.77	0.00	6.91	8.1	15.2	7.1	.163
	Men - 1966	6682	12.04	0.01	0.84	0.01	7.02	9.6	16.4	6.8	.175
	Men (Trainees) - 1966	2639	11.99	0.02	0.83	0.01	6.95	9.6	15.4	5.8	.174
	Women - 1946	8118	11.19	0.01	0.94	0.01	8.52	7.9	16.5	8.6	.175
	Women - 1977	1331	11.12	0.02	0.73	0.01	6.56	9.3	16.1	6.8	.173
37	Hip Breadth, Standing										
	Men - 1966	6682	13.07	0.01	0.79	0.01	6.05	10.6	17.7	7.1	.190
	Men (Trainees) - 1966	2639	13.01	0.02	0.78	0.01	6.00	10.7	17.6	6.9	.189
	Women - 1977	1331	13.92	0.03	0.97	0.02	7.00	11.2	19.3	8.1	.217
38	Forearm-Forearm Breadth										
	Men - 1946 ^a	24,590	17.54	0.01	1.54	0.01	8.78	13.6	24.2	10.6	.256
	Men - 1966	6682	18.10	0.02	1.66	0.01	9.17	13.1	26.1	13.0	.263
	Men (Trainees) - 1966	2639	17.78	0.03	1.61	0.02	9.03	13.1	25.3	12.2	.258
	Women - 1946 ^a	8116	15.04	0.02	1.44	0.01	9.72	10.6	25.2	14.6	.236
39	Hip Breadth, Sitting										
	Men - 1946	24,575	13.95	0.01	0.90	0.00	6.45	11.2	19.9	8.7	.204
	Men - 1966	6682	13.45	0.01	0.94	0.01	6.97	10.3	19.8	9.5	.196
	Men (Trainees) - 1966	2639	13.36	0.02	0.93	0.01	6.95	10.9	18.8	7.9	.194
	Women - 1946 ^b	8120	14.54	0.01	1.11	0.01	7.76	10.6	19.7	9.1	.228
	Women - 1977	255	15.07	0.08	1.29	0.06	8.56	11.8	18.8	7.0	.235

^aElbow-Elbow Breadth^bThigh-to-Thigh Breadth, Sitting

TABLE 26b. PERCENTILE VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	Percentiles in Inches										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		99th
BREADTH MEASUREMENTS (continued)													
36	Chest Breadth												
	Men - 1946	9.3	9.6	10.0	10.2	10.6	11.1	11.6	12.1	12.4	12.8	13.2	3.9
	Men - 1966	10.3	10.5	10.8	11.1	11.4	12.0	12.6	13.1	13.5	14.0	14.3	4.0
	Men (Trainees) - 1966	10.2	10.4	10.7	11.0	11.4	12.0	12.5	13.1	13.4	13.9	14.2	4.0
	Women - 1946	9.3	9.5	9.8	10.1	10.6	11.1	11.8	12.4	12.8	13.4	13.9	4.6
	Women - 1977	9.6	9.8	10.0	10.2	10.6	11.1	11.6	12.0	12.4	12.8	13.1	3.5
37	Hip Breadth, Standing												
	Men - 1966	11.4	11.6	11.9	12.1	12.5	13.0	13.6	14.1	14.5	14.9	15.2	3.8
	Men (Trainees) - 1966	11.4	11.6	11.8	12.1	12.5	13.0	13.5	14.0	14.4	14.8	15.1	3.7
	Women - 1977	11.9	12.1	12.4	12.7	13.3	13.9	14.5	15.2	15.6	16.1	16.5	4.6
38	Forearm-Forearm Breadth												
	Men - 1946 ^a	14.4	14.7	15.3	15.7	16.5	17.4	18.4	19.5	20.3	21.1	21.8	7.4
	Men - 1966	14.9	15.2	15.7	16.1	16.9	18.0	19.1	20.3	21.1	22.0	22.7	7.8
	Men (Trainees) - 1966	14.7	15.0	15.4	15.8	16.6	17.6	18.8	20.0	20.7	21.5	22.0	7.3
	Women - 1946 ^a	12.3	12.6	13.0	13.4	14.0	14.9	15.9	17.0	17.7	18.6	19.2	6.9
39	Hip Breadth, Sitting												
	Men - 1946	12.2	12.4	12.7	12.9	13.4	13.9	14.5	15.1	15.5	16.2	16.7	4.5
	Men - 1966	11.6	11.8	12.1	12.3	12.8	13.4	14.0	14.7	15.1	15.6	16.0	4.4
	Men (Trainees) - 1966	11.5	11.7	12.0	12.2	12.7	13.3	13.9	14.6	15.0	15.5	15.8	4.3
	Women - 1946	12.3	12.5	12.9	13.2	13.8	14.4	15.2	16.0	16.5	17.2	17.7	5.4
	Women - 1977 ^b	12.5	12.6	13.0	13.4	14.2	15.0	15.9	16.7	17.3	18.0	18.5	6.0

^aElbow-Elbow Breadth^bThigh-to-Thigh Breadth, Sitting

TABLE 26a. STATISTICAL VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	N	Mean	SE(M)	S.D.	SE(SD)	V(%)	Range		Stature ratio
								Min.	Max.	
CIRCUMFERENCES										
40	Neck Circumference									
	Men - 1946	24,423	14.46	0.00	0.73	0.00	5.05	11.6	19.1	7.5
	Men - 1966	6681	14.72	0.01	0.81	0.01	5.53	11.9	19.1	7.2
	Men (Trainees) - 1966	2639	14.62	0.02	0.80	0.01	5.46	11.9	19.1	7.2
	Women - 1946	8112	12.50	0.01	0.66	0.01	5.33	9.4	15.7	6.3
	Women - 1977	1331	12.74	0.02	0.62	0.01	4.87	10.8	16.4	5.6
41	Shoulder Circumference									
	Men - 1946	3409	43.26	0.04	2.51	0.03	5.80	35.4	54.3	18.9
	Men - 1966	6682	44.55	0.03	2.51	0.02	5.64	36.5	57.2	20.7
	Men (Trainees) - 1966	2639	44.21	0.05	2.50	0.03	5.66	36.5	54.8	18.3
	Men (Trainees) - 1977	287	43.67	0.14	2.42	0.10	5.54	37.5	51.2	13.7
	Women - 1977	1331	39.52	0.06	2.15	0.04	5.44	34.0	55.1	21.1
42	Chest/Bust Circumference									
	Men - 1946	24,470	36.38	0.01	2.34	0.01	6.43	28.0	48.4	20.4
	Men - 1966	6682	36.92	0.03	2.63	0.02	7.13	28.2	48.9	20.7
	Men (Trainees) - 1966	2639	36.53	0.05	2.54	0.04	6.97	28.2	48.3	20.1
	Men (Trainees) - 1977	287	36.58	0.15	2.60	0.11	7.11	31.0	43.8	12.8
	Women - 1946	8115	35.00	0.03	3.02	0.02	8.68	26.8	50.4	23.6
	Women - 1977	1331	34.73	0.07	2.53	0.05	7.28	27.1	50.6	23.5
43	Chest Circumference below Bust									
	Women - 1946	8115	30.44	0.03	2.41	0.02	7.98	23.6	46.1	22.5
	Women - 1977	1331	29.46	0.05	1.98	0.04	6.72	24.6	42.3	17.7

TABLE 26b. PERCENTILE VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	Percentiles in Inches										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		99th
CIRCUMFERENCES													
40	Neck Circumference												
	Men - 1946	12.8	13.0	13.3	13.5	13.9	14.4	14.9	15.4	15.7	16.1	16.4	3.6
	Men - 1966	13.0	13.2	13.5	13.7	14.2	14.7	15.2	15.8	16.1	16.5	16.8	3.8
	Men (Trainees) - 1966	12.8	13.1	13.4	13.6	14.1	14.6	15.1	15.7	16.0	16.4	16.6	3.8
	Women - 1946	11.1	11.3	11.5	11.7	12.0	12.5	12.9	13.4	13.7	14.0	14.3	3.2
	Women - 1977	11.4	11.6	11.8	12.0	12.3	12.7	13.1	13.5	13.8	14.1	14.3	2.9
41	Shoulder Circumference												
	Men - 1946	38.0	38.4	39.2	40.0	41.2	42.6	44.1	45.6	46.6	47.7	48.5	10.5
	Men - 1966	39.3	39.8	40.7	41.5	42.8	44.4	46.1	47.8	48.9	50.3	51.3	12.0
	Men (Trainees) - 1966	38.9	39.5	40.4	41.1	42.5	44.1	45.8	47.5	48.6	49.8	50.7	11.8
	Men (Trainees) - 1977			39.9	40.6	41.9	43.5	46.9	47.8				
	Women - 1977	35.2	35.5	36.2	36.8	38.1	39.4	40.9	42.2	43.1	44.2	45.0	9.8
42	Chest/Bust Circumference												
	Men - 1946	31.6	32.1	32.9	33.6	34.8	36.2	37.8	39.4	40.5	41.9	43.0	11.4
	Men - 1966	31.8	32.4	33.1	33.8	35.1	36.6	38.5	40.4	41.7	43.3	44.4	12.6
	Men (Trainees) - 1966	31.5	32.0	32.8	33.5	34.7	36.3	38.1	39.9	41.1	42.6	43.6	12.1
	Men (Trainees) - 1977			33.0	33.6	34.6	36.2	38.2	40.3	41.6			
	Women - 1946	29.4	30.0	30.8	31.5	32.8	34.6	36.8	39.1	40.6	42.4	43.7	14.3
	Women - 1977	30.0	30.2	30.8	31.6	33.0	34.6	36.2	37.9	39.0	40.5	41.7	11.7
43	Chest Circumference below Bust												
	Women - 1946	25.9	26.4	27.0	27.6	28.7	30.1	31.8	33.7	34.9	36.5	37.7	11.8
	Women - 1977	26.0	26.1	26.5	27.0	28.1	29.3	30.6	31.9	32.8	34.1	35.1	9.1

TABLE 26a. STATISTICAL VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	N	Mean	SE(M)	Values in Inches				Range		Stature ratio
					S.D.	SE(SD)	V(%)	Min.	Max.	Total	
CIRCUMFERENCES (continued)											
44	Waist Circumference										
	Men - 1946	24,472	30.60	0.02	2.76	0.01	9.02	23.2	46.8	23.6	.447
	Men - 1966	6682	31.61	0.04	3.22	0.03	10.19	23.1	50.3	27.2	.460
	Men (Trainees) - 1966	2639	31.33	0.06	3.18	0.04	10.15	23.1	46.2	23.1	.456
	Men (Trainees) - 1977	287	31.05	0.19	3.27	0.14	10.53	25.0	42.6	17.6	.453
	Women - 1946	8115	26.38	0.03	2.46	0.02	9.38	20.5	43.3	22.8	.413
	Women - 1977	1331	27.96	0.07	2.72	0.05	9.73	22.2	46.3	24.1	.436
45	Hip (Buttock) Circumference										
	Men - 1946	24,500	36.67	0.01	2.24	0.01	6.11	26.4	50.0	23.6	.536
	Men - 1966	6682	37.09	0.03	2.46	0.02	6.63	30.4	52.8	22.4	.540
	Men (Trainees) - 1966	2639	36.79	0.05	2.51	0.03	6.81	30.4	49.3	18.9	.535
	Men (Trainees) - 1977	287	37.46	0.14	2.38	0.10	6.35	33.0	44.8	11.8	.547
	Women - 1946	8113	37.44	0.03	2.64	0.02	7.08	29.1	49.6	20.5	.586
	Women - 1977	1331	37.61	0.07	2.51	0.05	6.67	30.5	53.0	22.5	.586
46	Vertical Trunk Circum., Standing										
	Men - 1966	6682	64.61	0.04	3.34	0.03	5.17	53.2	78.6	25.4	.940
	Men (Trainees) - 1966	2639	64.84	0.06	3.33	0.05	7.30	53.8	77.4	23.6	.943
	Women - 1946	7771	58.94	0.03	2.82	0.02	4.80	49.2	72.8	23.6	.923
	Women - 1977	1331	60.57	0.08	2.86	0.06	4.72	51.3	73.3	22.0	.944
	LIMB CIRCUMFERENCES										
47	Scye Circumference										
	Men - 1946	24,383	17.09	0.01	1.17	0.01	6.85	13.9	22.2	8.3	.250
	Men - 1966	6682	17.54	0.02	1.28	0.01	7.32	12.7	23.7	11.0	.255
	Men (Trainees) - 1966	2639	17.48	0.02	1.22	0.02	7.00	13.5	22.9	9.4	.254
	Women - 1946	8119	14.93	0.01	1.24	0.01	8.38	9.1	20.1	11.0	.234
	Women - 1977	1331	14.77	0.03	0.95	0.02	6.43	11.9	20.2	8.3	.230

TABLE 26b. PERCENTILE VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	Percentiles in Inches										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		99th
CIRCUMFERENCES (continued)													
44	Waist Circumference												
	Men - 1946	25.6	26.1	26.9	27.5	28.7	30.2	32.0	34.1	35.8	37.7	39.1	13.5
	Men - 1966	26.1	26.7	27.4	28.1	29.3	31.0	33.4	36.0	37.8	40.0	41.6	15.5
	Men (Trainees) - 1966	25.8	26.5	27.3	27.9	29.0	30.7	33.1	35.8	37.6	39.6	40.8	15.0
	Men (Trainees) - 1977			26.9	27.7	28.9	30.1	32.7	36.0	37.8			
	Women - 1946	22.1	22.5	23.1	23.7	24.6	26.0	27.7	29.7	31.1	32.8	34.1	12.0
	Women - 1977	23.2	23.6	24.3	24.9	26.1	27.6	29.4	31.4	32.9	34.8	36.4	13.2
45	Hip (Buttock) Circumference												
	Men - 1946	31.7	32.3	33.3	34.0	35.1	36.5	38.0	39.5	40.5	41.8	42.8	11.1
	Men - 1966	32.3	32.8	33.5	34.2	35.4	36.8	38.6	40.4	41.6	43.0	44.1	11.8
	Men (Trainees) - 1966	31.9	32.4	33.2	33.8	35.0	36.5	38.3	40.2	41.4	42.8	43.7	11.8
	Men (Trainees) - 1977			34.4	34.8	35.6	37.0	38.9	40.9	42.1			
	Women - 1946	32.4	32.9	33.6	34.3	35.6	37.2	39.0	40.9	42.2	43.9	45.2	12.8
	Women - 1977	32.1	32.7	33.7	34.5	35.9	37.5	39.1	40.7	41.8	43.1	44.2	12.1
46	Vertical Trunk Circum., Standing												
	Men - 1966	52.7	58.1	59.3	60.4	62.3	64.5	66.7	68.9	70.3	72.0	73.2	16.0
	Men (Trainees) - 1966	57.1	58.0	59.4	60.6	62.6	64.8	67.0	69.1	70.4	72.1	73.3	16.2
	Women - 1946	52.9	53.6	54.6	55.5	57.0	58.8	60.7	62.6	63.9	65.4	66.5	13.6
	Women - 1977	53.7	54.7	56.0	57.0	58.7	60.5	62.4	64.2	65.4	66.7	67.6	13.9
LIMB CIRCUMFERENCES													
47	Scye Circumference												
	Men - 1946	14.5	14.8	15.3	15.7	16.3	17.0	17.8	18.6	19.1	19.7	20.1	5.6
	Men - 1966	14.8	15.1	15.6	16.0	16.7	17.4	18.3	19.2	19.8	20.6	21.2	6.4
	Men (Trainees) - 1966	15.0	15.2	15.6	16.0	16.6	17.4	18.2	19.1	19.6	20.3	20.8	5.8
	Women - 1946	12.3	12.6	13.0	13.4	14.1	14.8	15.7	16.5	17.1	17.8	18.3	6.0
	Women - 1977	12.8	13.0	13.3	13.6	14.1	14.7	15.3	16.0	16.4	17.0	17.4	4.6

TABLE 26a. STATISTICAL VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

Values in Inches										
No.	Measurements	N	Mean	SE(M)	S.D.	SE(SD)	V(%)	Range		Stature ratio
								Min.	Max.	
LIMB CIRCUMFERENCES (continued)										
48	Biceps Circum., Relaxed									
	Men - 1946	24,446	11.05	0.01	0.93	0.00	8.42	8.0	15.4	.161
	Men - 1966	6682	11.59	0.01	1.08	0.01	9.29	8.2	17.4	.169
	Men (Trainees) - 1966	2639	11.42	0.02	1.09	0.01	9.53	8.2	15.2	.166
	Men (Trainees) - 1977	287	11.48	0.06	1.09	0.05	9.49	8.7	15.0	.168
	Women - 1946	8116	10.09	0.01	1.07	0.01	10.83	7.1	15.7	.158
	Women - 1977	255	10.19	0.06	1.01	0.04	9.91	8.0	13.5	.159
49	Biceps Circum., Flexed									
	Men - 1966	6682	12.70	0.01	1.08	0.01	8.52	9.0	17.8	.185
	Men (Trainees) - 1966	2639	12.52	0.02	1.08	0.01	8.63	9.0	17.2	.182
	Men (Trainees) - 1977	287	12.35	0.06	1.07	0.04	8.66	9.4	15.4	.180
	Women - 1977	1331	10.58	0.02	0.90	0.02	8.51	8.2	15.5	.165
50	Forearm Circum., Relaxed									
	Men - 1946	24,491	10.54	0.00	0.64	0.00	6.07	8.0	13.5	.154
	Women - 1946	8110	8.87	0.01	0.65	0.01	7.38	6.8	11.8	.139
	Women - 1977	255	9.16	0.04	0.59	0.03	6.44	8.0	11.3	.143
51	Forearm Circum., Flexed									
	Men - 1966	6682	11.59	0.01	0.85	0.01	7.31	8.9	16.3	.169
	Men (Trainees) - 1966	2639	11.51	0.02	0.80	0.01	6.99	8.9	14.7	.167
	Women - 1977	1331	9.70	0.02	0.60	0.01	6.19	8.0	13.0	.151
52	Wrist Circumference									
	Men - 1946	24,391	6.70	0.00	0.40	0.00	5.97	5.3	8.3	.098
	Men - 1966	6682	6.72	0.00	0.34	0.00	5.13	5.4	8.5	.098
	Men (Trainees) - 1966	2639	6.73	0.01	0.34	0.00	4.99	5.8	8.1	.098
	Women - 1946	8112	5.79	0.00	0.32	0.00	5.53	4.5	7.2	.091
	Women - 1977	1331	5.79	0.01	0.27	0.01	4.66	5.1	6.9	.090

TABLE 26b. PERCENTILE VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	Percentiles in Inches										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		99th
LIMB CIRCUMFERENCES (continued)													
48	Biceps Circum., Relaxed												
	Men - 1946	9.1	9.3	9.6	9.9	10.4	11.0	11.6	12.3	12.7	13.2	13.5	4.4
	Men - 1966	9.4	9.6	10.0	10.3	10.8	11.5	12.3	13.0	13.5	14.0	14.4	5.0
	Men (Trainees) - 1966	9.2	9.5	9.8	10.1	10.6	11.3	12.1	12.9	13.4	13.9	14.2	5.0
	Men (Trainees) - 1977			9.8	10.1	10.7	11.4	12.2	12.9	13.4			
	Women - 1946	8.0	8.2	8.5	8.8	9.3	10.0	10.7	11.6	12.1	12.7	13.1	5.1
	Women - 1977	8.3	8.4	8.5	8.8	9.5	10.2	10.8	11.3	11.9	12.9	13.2	4.9
49	Biceps Circum., Flexed												
	Men - 1966	10.4	10.7	11.0	11.4	12.0	12.6	13.4	14.1	14.6	15.1	15.5	5.1
	Men (Trainees) - 1966	10.3	10.5	10.8	11.2	11.8	12.5	13.2	14.0	14.4	14.9	15.3	5.0
	Men (Trainees) - 1977			10.6	11.0	11.6	12.3	13.1	13.8	14.2			
	Women - 1977	8.6	8.8	9.1	9.4	10.0	10.6	11.1	11.7	12.1	12.6	13.0	4.4
50	Forearm Circum., Relaxed												
	Men - 1946	9.0	9.2	9.5	9.7	10.1	10.5	10.9	11.3	11.6	11.9	12.1	3.1
	Women - 1946	7.5	7.6	7.9	8.1	9.4	8.8	9.3	9.7	10.0	10.4	10.7	3.2
	Women - 1977	8.1	8.1	8.3	8.4	8.7	9.1	9.6	10.0	10.2	10.5	10.6	2.5
51	Forearm Circum., Flexed												
	Men - 1966	9.8	10.0	10.3	10.5	11.0	11.6	12.1	12.7	13.0	13.5	13.8	4.0
	Men (Trainees) - 1966	9.8	9.9	10.2	10.5	10.9	11.5	12.0	12.6	12.9	13.2	13.5	3.7
	Women - 1977	8.3	8.5	8.7	8.9	9.3	9.7	10.1	10.5	10.7	11.0	11.1	2.8
52	Wrist Circumference												
	Men - 1946	5.8	5.9	6.0	6.2	6.4	6.7	7.0	7.3	7.4	7.6	7.7	1.9
	Men - 1966	5.9	6.0	6.2	6.3	6.5	6.7	6.9	7.2	7.3	7.5	7.6	1.7
	Men (Trainees) - 1966	6.0	6.1	6.2	6.3	6.5	6.7	6.9	7.2	7.3	7.5	7.6	1.6
	Women - 1946	5.1	5.2	5.3	5.4	5.6	5.8	6.0	6.2	6.4	6.5	6.7	1.6
	Women - 1977	5.2	5.3	5.4	5.4	5.6	5.8	6.0	6.1	6.2	6.3	6.4	1.2

TABLE 26a. STATISTICAL VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	N	Mean	SE(M)	Values in Inches				Range		Stature ratio	
					S.D.	SE(SD)	V(%)	Min.	Max.	Total		
Limb CIRCUMFERENCES (continued)												
53	Upper Thigh Circumference											
	Men - 1946	24,832	21.44	0.01	1.70	0.01	7.93	16.2	27.7	11.5	.313	
	Men - 1966	6682	21.82	0.02	1.89	0.02	8.66	15.3	30.6	15.3	.318	
	Men (Trainees) - 1966	2639	21.48	0.04	1.95	0.03	9.06	16.0	29.8	13.8	.312	
	Women - 1946	7781	22.08	0.02	2.06	0.02	9.40	15.4	31.1	15.7	.346	
	Women - 1977	1331	22.41	0.05	1.81	0.04	8.08	17.0	31.5	14.5	.349	
54	Calf Circumference											
	Men - 1946	24,686	14.08	0.01	0.94	0.00	6.68	10.7	18.6	7.9	.206	
	Men - 1966	6682	14.41	0.01	1.05	0.01	7.29	11.1	20.0	8.9	.210	
	Men (Trainees) - 1966	2639	14.28	0.02	1.08	0.01	9.56	11.1	18.0	6.9	.208	
	Men (Trainees) - 1977	287	14.10	0.06	1.10	0.05	7.80	11.2	17.3	6.1	.206	
	Women - 1977	1331	13.82	0.03	0.99	0.02	7.16	11.0	18.7	7.7	.215	
55	Ankle Circumference											
	Men - 1966	6682	8.93	0.01	0.57	0.00	6.34	7.1	12.1	5.0	.130	
	Men (Trainees) - 1966	2639	8.94	0.01	0.56	0.01	6.29	7.1	11.0	3.9	.130	
	Men (Trainees) - 1977	287	8.55	0.03	0.56	0.02	6.55	7.1	10.2	3.1	.125	
	Women - 1977	1331	8.16	0.01	0.49	0.01	6.00	6.6	9.8	3.2	.127	
SURFACE MEASUREMENTS												
56	Shoulder Length											
	Men - 1946	24,453	6.05	0.00	0.67	0.00	11.07	4.0	8.4	4.4	.088	
	Men - 1966	6682	6.38	0.01	0.78	0.01	12.25	3.4	9.6	6.2	.093	
	Men (Trainees) - 1966	2639	6.21	0.01	0.73	0.01	11.83	3.8	9.0	5.2	.090	
	Women - 1946	8118	4.78	0.01	0.46	0.00	9.60	3.3	6.6	3.3	.075	
	Women - 1977	1331	5.91	0.01	0.42	0.01	7.11	4.6	7.4	2.8	.092	

TABLE 26b. PERCENTILE VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	Percentiles in Inches											Range (1st-99th)
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th	99th	
LIMB CIRCUMFERENCES (continued)													
53	Upper Thigh Circumference												
	Men - 1946	17.9	18.2	18.8	19.3	20.2	21.3	22.5	23.7	24.5	25.4	26.0	8.1
	Men - 1966	17.9	18.3	18.9	19.5	20.5	21.7	23.0	24.3	25.1	26.0	26.6	8.7
	Men (Trainees) - 1966	17.6	18.0	18.6	19.1	20.1	21.3	22.7	24.1	25.0	25.9	26.4	8.8
	Women - 1946	17.9	18.4	19.0	19.6	20.6	21.9	23.3	24.8	25.8	26.9	27.6	9.7
	Women - 1977	18.3	18.7	19.4	20.1	21.2	22.4	23.6	24.6	25.4	26.4	27.2	8.9
54	Calf Circumference												
	Men - 1946	12.0	12.2	12.6	12.9	13.4	14.0	14.6	15.3	15.6	16.2	16.5	4.5
	Men - 1966	12.2	12.4	12.8	13.1	13.7	14.4	15.1	15.8	16.2	16.7	17.1	4.9
	Men (Trainees) - 1966	12.0	12.2	12.6	12.9	13.5	14.2	15.0	15.7	16.2	16.7	17.0	5.0
	Women - 1977	11.7	11.9	12.2	12.5	13.1	13.8	14.5	15.1	15.4	15.9	16.3	4.6
55	Ankle Circumference												
	Men - 1966	7.8	7.9	8.1	8.2	8.5	8.9	9.3	9.7	9.9	10.2	10.4	2.6
	Men (Trainees) - 1966	7.8	7.9	8.1	8.2	8.6	8.9	9.3	9.7	9.9	10.2	10.4	2.6
	Men (Trainees) - 1977	7.0	7.2	7.6	7.8	8.2	8.6	8.9	9.2	9.5	9.8	10.1	2.4
	Women - 1977	7.0	7.2	7.4	7.5	7.8	8.2	8.5	8.8	9.0	9.2	9.4	2.4
SURFACE MEASUREMENTS													
56	Shoulder Length												
	Men - 1946	4.3	4.5	4.9	5.2	5.6	6.1	6.5	6.9	7.1	7.4	7.5	3.2
	Men - 1966	4.4	4.6	5.0	5.3	5.9	6.4	6.9	7.3	7.6	7.8	8.1	3.7
	Men (Trainees) - 1966	4.4	4.6	4.9	5.2	5.8	6.3	6.7	7.1	7.3	7.7	8.0	3.6
	Women - 1946	3.8	3.9	4.0	4.2	4.5	4.8	5.1	5.4	5.5	5.8	6.0	2.2
	Women - 1977	4.9	5.0	5.2	5.4	5.6	5.9	6.2	6.4	6.6	6.8	7.0	2.1

TABLE 26a. STATISTICAL VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	N	Mean	SE(M)	S.D.	SE(ED)	V(%)	Range		Stature ratio
								Min.	Max.	
SURFACE MEASUREMENTS (continued)										
57	Interscye, Back									
	Men - 1946	24,432	14.82	0.01	1.18	0.01	7.96	9.6	19.9	10.3
	Men - 1966	6682	15.39	0.02	1.24	0.01	8.07	10.7	20.4	9.7
	Men (Trainees) - 1966	2639	15.33	0.02	1.23	0.02	8.00	10.9	20.0	9.1
	Men (Trainees) - 1977	287	16.15	0.07	1.11	0.05	6.87	13.1	18.9	5.8
	Women - 1946	8120	13.54	0.01	1.08	0.01	8.11	9.1	17.7	8.6
	Women - 1977	1331	14.90	0.03	0.93	0.02	6.24	12.0	18.8	6.8
58	Interscye, Front									
	Men (Trainees) - 1977	287	14.44	0.05	0.77	0.03	5.33	12.5	16.3	3.8
	Women - 1977	1331	13.06	0.02	0.69	0.01	5.28	11.2	15.9	4.7
59	Back Curvature - Chest Level									
	Men (Trainees) - 1977	287	17.78	0.08	1.33	0.06	7.48	14.9	21.5	6.6
	Women - 1977	1331	16.52	0.03	1.25	0.02	7.57	12.0	24.6	12.6
60	Back Curvature - Waist Level									
	Men (Trainees) - 1977	287	15.34	0.10	1.68	0.07	10.95	12.2	22.6	10.4
	Women - 1977	1331	13.90	0.04	1.37	0.03	9.86	10.7	23.3	12.6
61	Back Curvature - Hip Level									
	Men (Trainees) - 1977	287	18.33	0.07	1.23	0.05	6.71	15.6	23.0	7.4
	Women - 1977	1331	18.70	0.04	1.47	0.03	7.86	14.1	27.0	12.9
62	Waist Back Length									
	Men - 1966	6682	17.73	0.02	1.35	0.01	7.64	13.5	22.9	9.4
	Men (Trainees) - 1966	2639	17.59	0.02	1.28	0.02	7.30	13.3	22.7	9.4
	Men (Trainees) - 1977	287	17.68	0.07	1.26	0.05	7.13	14.8	20.9	6.1
	Women - 1946	8115	14.88	0.01	0.90	0.01	6.10	11.4	18.5	7.1
	Women - 1977	1331	16.08	0.03	1.04	0.02	6.47	13.3	20.3	7.0

TABLE 26b. PERCENTILE VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	Percentiles in Inches										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		99th
SURFACE MEASUREMENTS (continued)													
57	Interscye, Back												
	Men - 1946	12.1	12.4	12.9	13.3	14.0	14.8	15.6	16.3	16.8	17.3	17.7	5.6
	Men - 1966	12.6	12.9	13.4	13.8	14.6	15.4	16.2	17.0	17.4	18.0	18.4	5.8
	Men (Trainees) - 1966	12.6	12.8	13.3	13.7	14.5	15.3	16.2	16.9	17.3	17.8	18.2	5.6
	Men (Trainees) - 1977			14.4	14.7	15.4	16.1	16.9	17.6	18.1			
	Women - 1946	11.2	11.4	11.8	12.2	12.8	13.5	14.2	15.0	15.4	15.9	16.3	5.1
	Women - 1977	12.8	13.0	13.4	13.7	14.3	14.9	15.5	16.1	16.4	16.8	17.2	4.4
58	Interscye, Front												
	Men (Trainees) - 1977	11.6	11.7	12.0	12.2	12.6	13.0	13.5	14.0	14.2	14.6	14.8	3.2
59	Back Curvature - Chest Level												
	Men (Trainees) - 1977	13.9	14.2	14.6	15.0	15.7	16.5	17.3	18.1	18.6	19.4	19.9	6.0
60	Back Curvature - Waist Level												
	Men (Trainees) - 1977	11.4	11.7	12.0	12.4	13.0	13.7	14.6	15.6	16.4	17.4	18.2	6.8
61	Back Curvature - Hip Level												
	Men (Trainees) - 1977	15.6	15.9	16.5	16.9	17.4	18.1	19.1	20.1	20.7	22.0	22.6	7.0
62	Waist Back Length												
	Men - 1966	14.8	15.1	15.6	16.0	16.8	17.7	18.6	19.5	20.0	20.5	20.9	6.1
	Men (Trainees) - 1966	14.8	15.0	15.5	15.9	16.7	17.6	18.5	19.3	19.8	20.2	20.6	5.8
	Men (Trainees) - 1977			15.6	16.0	16.8	17.7	18.6	19.4	19.8			
	Women - 1946	12.8	13.0	13.4	13.7	14.3	14.9	15.5	16.0	16.4	16.7	17.0	4.2
	Women - 1977	13.9	14.1	14.4	14.8	15.4	16.0	16.8	17.4	17.9	18.4	18.7	4.8

TABLE 26a. STATISTICAL VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	N	Values in Inches					Range		Stature ratio
			Mean	SE(M)	S.D.	SE(SD)	V(%)	Min.	Max.	
SURFACE MEASUREMENTS (continued)										
63	Waist Front Length									
	Men (Trainees) - 1977	287	16.16	0.07	1.19	0.05	7.36	12.8	19.3	6.5
	Women - 1946	8106	12.87	0.01	0.79	0.01	6.13	10.2	15.7	5.5
	Women - 1977	1331	14.46	0.03	1.03	0.02	7.12	11.6	18.8	7.2
64	Axilla to Waist Length									
	Women - 1946	8113	9.11	0.01	1.05	0.01	11.73	3.9	13.8	9.9
	Women - 1977	1331	9.09	0.03	0.99	0.02	10.89	6.4	13.8	7.4
65	Sleeve Inseam Length									
	Men - 1966	6682	19.13	0.01	1.05	0.01	5.51	15.4	23.5	8.1
	Men (Trainees) - 1966	2639	19.14	0.02	1.01	0.01	5.30	15.8	23.5	7.7
	Men (Trainees) - 1977	287	19.00	0.06	1.07	0.04	5.63	15.3	22.2	6.9
	Women - 1977	1331	17.74	0.03	1.03	0.02	5.81	14.4	21.5	7.1
66	Sleeve Outseam Length									
	Men (Trainees) - 1977	287	23.14	0.07	1.27	0.05	5.49	18.6	26.3	7.7
	Women - 1977	1331	21.18	0.03	1.17	0.02	5.52	17.5	25.4	7.9
67	Sleeve Length									
	Men - 1946	24,470	31.89	0.01	1.73	0.01	5.42	24.8	39.0	14.2
	Men - 1966	6682	33.80	0.02	1.56	0.01	4.61	27.7	39.5	11.8
	Men (Trainees) - 1966	2639	33.76	0.03	1.48	0.02	4.38	28.4	39.5	11.1
68	Crotch Length									
	Men - 1946	24,434	28.47	0.01	2.24	0.01	7.87	20.1	39.0	18.9
	Women - 1946	7778	27.58	0.03	2.27	0.02	8.29	18.1	39.0	20.9
	Women - 1977	1331	28.71	0.06	2.15	0.04	7.49	20.7	39.4	8.7

TABLE 26b. PERCENTILE VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	Percentiles in Inches										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		99th
SURFACE MEASUREMENTS (continued)													
63	Waist Front Length												
	Men (Trainees) - 1977	11.1	11.3	14.2	14.6	15.3	16.1	17.0	17.7	18.2			
	Women - 1946	12.4	12.6	11.6	11.9	12.4	12.8	13.4	13.9	14.2	14.6	14.9	3.8
	Women - 1977			12.9	13.2	13.7	14.4	15.1	15.8	16.3	16.9	17.4	5.0
64	Axilla to Waist Length												
	Women - 1946	6.8	7.1	7.5	7.9	8.4	9.1	9.8	10.4	10.9	11.4	11.8	5.0
	Women - 1977	7.1	7.3	7.6	7.9	8.4	9.0	9.7	10.4	10.8	11.5	12.1	5.0
65	Sleeve Inseam Length												
	Men - 1966	16.7	17.0	17.4	17.8	18.4	19.1	19.8	20.5	20.9	21.4	21.7	5.0
	Men (Trainees) - 1966	16.9	17.1	17.4	17.8	18.4	19.1	19.8	20.4	20.8	21.3	21.7	4.8
	Men (Trainees) - 1977			17.3	17.7	18.3	19.0	19.7	20.4	20.8			
	Women - 1977	15.5	15.8	16.1	16.4	17.0	17.7	18.4	19.1	19.5	20.0	20.3	4.8
66	Sleeve Outseam Length												
	Men (Trainees) - 1977	18.6	18.9	21.2	21.6	22.3	23.1	24.0	24.9	25.4	23.6	23.9	5.3
	Women - 1977			19.4	19.7	20.4	21.1	22.0	22.8	23.2			
67	Sleeve Length												
	Men - 1946	27.9	28.2	29.1	29.7	30.7	31.9	33.1	34.1	34.8	35.5	36.0	8.1
	Men - 1966	30.2	30.6	31.3	31.8	32.7	33.8	34.8	35.8	36.4	37.1	37.5	7.3
	Men (Trainees) - 1966	30.4	30.8	31.3	31.8	32.7	33.7	34.8	35.7	36.2	36.9	37.3	6.9
68	Crotch Length												
	Men - 1946	23.6	24.1	25.0	25.7	26.9	28.3	29.8	31.3	32.3	34.0	35.5	11.9
	Women - 1946	22.6	23.3	24.2	24.9	26.1	27.4	28.9	30.5	31.6	33.0	34.0	11.4
	Women - 1977	22.9	23.8	25.1	26.0	27.4	28.8	30.1	31.3	32.1	33.0	33.6	10.7

TABLE 26a. STATISTICAL VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	N	Mean	SE(M)	S.D.	SE(SD)	V(%)	Values in Inches		Stature ratio
								Min.	Max.	
69	Head Circumference									
	Men - 1946	24,466	22.30	0.00	0.62	0.00	2.78	19.50	25.00	5.50
	Men - 1966	6682	22.09	0.01	0.63	0.01	2.86	20.06	25.13	5.07
	Men (Trainees) - 1966	2639	22.01	0.01	0.61	0.01	2.79	20.06	24.30	4.24
	Men (Trainees) - 1977	287	22.05	0.04	0.64	0.03	2.90	20.31	23.74	3.43
	Women - 1946	8112	21.71	0.01	0.61	0.00	2.82	19.68	24.02	4.34
	Women - 1977	1331	21.62	0.02	0.64	0.01	2.96	19.57	24.09	4.52
70	Sagittal Arc									
	Men (Trainees) - 1977	102	13.70	0.06	0.59	0.04	4.31	11.81	15.28	3.47
	Women - 1977	216	13.24	0.04	0.61	0.03	4.61	11.77	15.31	3.54
71	Bitracion-Coronal Arc									
	Men (Trainees) - 1977	102	13.43	0.05	0.50	0.04	3.72	12.20	14.65	2.45
	Women - 1977	216	13.08	0.03	0.50	0.02	3.82	11.89	15.08	3.19
72	Bitracion-Frontal Arc									
	Men (Trainees) - 1977	102	11.54	0.04	0.42	0.03	3.64	10.43	12.48	2.05
	Women - 1977	216	11.18	0.03	0.40	0.02	3.58	10.12	12.28	2.16
73	Bitracion-Menton Arc									
	Men (Trainees) - 1977	102	12.24	0.05	0.51	0.04	4.17	11.14	13.46	2.32
	Women - 1977	216	11.56	0.04	0.52	0.03	4.50	10.20	13.15	2.95
74	Bitracion-Submandibular Arc									
	Men (Trainees) - 1977	102	11.27	0.05	0.51	0.04	4.53	10.20	12.52	2.32
	Women - 1977	216	10.43	0.04	0.53	0.03	5.08	9.13	12.01	2.88

TABLE 26b. PERCENTILE VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	Percentiles in Inches										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		99th
HEAD AND FACE MEASUREMENTS													
69	Head Circumference												
	Men - 1946	20.87	21.05	21.30	21.50	21.88	22.29	22.73	23.10	23.36	23.65	23.84	2.97
	Men - 1966	20.63	20.81	21.07	21.30	21.66	22.08	22.51	22.91	23.16	23.43	23.61	2.98
	Men (Trainees) - 1966	20.54	20.73	21.00	21.23	21.60	22.00	22.41	22.79	23.03	23.31	23.51	2.97
	Men (Trainees) - 1977			20.94	21.22	21.65	22.09	22.48	22.83	23.07			
	Women - 1946	20.28	20.46	20.72	20.94	21.30	21.70	22.12	22.50	22.74	23.02	23.21	2.93
	Women - 1977	20.22	20.37	20.61	20.82	21.18	21.60	22.03	22.45	22.73	23.07	23.33	3.11
70	Sagittal Arc												
	Men (Trainees) - 1977	12.05	12.20	12.26	12.46	12.78	13.24	13.64	14.06	14.49	14.76	15.04	2.99
	Women - 1977										14.61		
71	Bitrignon-Coronal Arc												
	Men (Trainees) - 1977	12.01	12.13	12.31	12.47	12.74	13.06	13.40	13.72	13.93	14.17	14.33	2.32
	Women - 1977												
72	Bitrignon-Frontal Arc												
	Men (Trainees) - 1977	10.28	10.35	10.50	10.65	10.90	11.18	11.44	11.69	11.85	12.05	12.20	1.92
	Women - 1977												
73	Bitrignon-Menton Arc												
	Men (Trainees) - 1977	10.35	10.51	10.74	10.92	11.22	11.54	11.89	12.23	12.45	12.72	12.87	2.52
	Women - 1977												
74	Bitrignon-Submandibular Arc												
	Men (Trainees) - 1977	9.25	9.41	9.63	9.79	10.05	10.39	10.78	11.16	11.37	11.54	11.61	2.36
	Women - 1977												

TABLE 26a. STATISTICAL VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	N	Mean	SE(M)	S.D.	SE(SD)	V(%)	Values in Inches		Stature ratio
								Min.	Max.	
HEAD AND FACE MEASUREMENTS (continued)										
75	Head Length									
	Men - 1946	24,471	7.67	0.00	0.28	0.00	3.65	6.10	9.06	.112
	Men - 1966	6682	7.66	0.00	0.29	0.00	3.77	6.56	8.83	.111
	Men (Trainees) - 1966	2639	7.64	0.01	0.28	0.00	3.69	6.56	8.59	.111
	Men (Trainees) - 1977	287	7.66	0.02	0.28	0.01	3.66	6.61	8.43	.112
	Women - 1946	8118	7.23	0.00	0.26	0.00	3.54	6.22	8.07	.113
	Women - 1977	1331	7.37	0.01	0.26	0.01	3.53	6.38	8.19	.115
76	Glabella to back of head									
	Men (Trainees) - 1977	102	7.72	0.03	0.28	0.02	3.63	7.05	8.54	.113
	Women - 1977	216	7.58	0.03	0.39	0.02	5.15	6.46	8.98	.118
77	Sellion to back of head									
	Men - 1966	6682	7.52	0.00	0.28	0.00	3.77	6.48	8.67	.109
	Men (Trainees) - 1966	2639	7.50	0.01	0.28	0.00	3.73	6.56	8.44	.109
	Men (Trainees) - 1977	102	7.67	0.03	0.28	0.02	3.65	6.97	8.50	.112
	Women - 1977	216	7.94	0.03	0.38	0.02	4.79	6.93	9.41	.124
78	Pronasale to back of head									
	Men - 1966	6682	8.74	0.00	0.33	0.00	3.75	7.42	10.01	.127
	Men (Trainees) - 1966	2639	8.73	0.01	0.33	0.00	3.74	7.42	10.01	.127
	Men (Trainees) - 1977	102	8.74	0.03	0.29	0.02	3.32	7.91	9.57	.128
	Women - 1977	216	8.46	0.03	0.38	0.02	4.49	7.44	9.84	.132
79	Subnasale to back of head									
	Men (Trainees) - 1977	102	8.22	0.03	0.31	0.02	3.77	7.56	9.17	.120
	Women - 1977	216	7.92	0.03	0.39	0.02	4.92	6.89	9.33	.123

TABLE 26b. PERCENTILE VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	Percentiles in Inches										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		99th
HEAD AND FACE MEASUREMENTS (continued)													
75	Head Length												
	Men - 1946	7.01	7.09	7.21	7.31	7.48	7.67	7.86	8.03	8.13	8.24	8.33	1.32
	Men - 1966	6.99	7.07	7.19	7.29	7.47	7.67	7.86	8.03	8.14	8.26	8.34	1.35
	Men (Trainees) - 1966	6.96	7.05	7.17	7.28	7.45	7.64	7.83	8.00	8.11	8.23	8.32	1.36
	Men (Trainees) - 1977			7.20	7.32	7.48	7.68	7.83	7.99	8.11			
	Women - 1946	6.64	6.70	6.80	6.89	7.06	7.23	7.41	7.56	7.65	7.75	7.82	1.18
	Women - 1977	6.72	6.81	6.93	7.03	7.19	7.36	7.54	7.70	7.80	7.91	7.98	1.26
76	Glabella to back of head												
	Men (Trainees) - 1977	6.73	6.89	7.28	7.40	7.52	7.72	7.87	8.07	8.19			
	Women - 1977			7.03	7.14	7.32	7.53	7.79	8.09	8.29	8.54	8.74	2.01
77	Sellion to back of head												
	Men - 1966	6.84	6.92	7.04	7.15	7.33	7.52	7.71	7.88	7.98	8.09	8.17	1.33
	Men (Trainees) - 1966	6.84	6.91	7.03	7.14	7.31	7.51	7.69	7.86	7.96	8.09	8.18	1.34
	Men (Trainees) - 1977			7.24	7.32	7.52	7.68	7.83	7.99	8.15			
	Women - 1977	7.13	7.24	7.41	7.52	7.68	7.88	8.14	8.44	8.65	8.90	9.06	1.93
78	Pronasale to back of head												
	Men - 1966	7.94	8.04	8.18	8.31	8.52	8.74	8.96	9.15	9.27	9.40	9.48	1.54
	Men (Trainees) - 1966	7.95	8.04	8.18	8.30	8.51	8.73	8.95	9.14	9.25	9.39	9.49	1.54
	Men (Trainees) - 1977			8.27	8.35	8.54	8.74	8.94	9.13	9.21			
	Women - 1977	7.64	7.76	7.90	8.02	8.21	8.43	8.69	8.96	9.15	9.37	9.53	1.89
79	Subnasale to back of head												
	Men (Trainees) - 1977	7.09	7.20	7.72	7.83	7.99	8.23	8.39	8.58	8.74			
	Women - 1977			7.34	7.45	7.64	7.87	8.14	8.43	8.63	8.86	9.02	1.93

TABLE 26a. STATISTICAL VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	N	Mean	Values in Inches				Range		Stature ratio		
				SE(11)	S.D.	SE(SD)	V(%)	Min.	Max.		Total	
HEAD AND FACE MEASUREMENTS (continued)												
80	Lip Protrusion to back of head											
		Men (Trainees) - 1977	102	8.23	0.04	0.39	0.03	7.40	9.41	4.74	2.01	.120
	Women - 1977	216	7.91	0.03	0.46	0.02	6.89	9.53	5.82	2.64	.123	
81	Menton to back of head											
		Men (Trainees) - 1977	102	7.96	0.04	0.44	0.03	6.93	9.29	5.53	2.36	.116
	Women - 1977	216	7.67	0.03	0.43	0.02	6.69	8.98	5.61	2.29	.120	
82	Ectocanthus to back of head											
		Men - 1966	6682	6.79	0.00	0.38	0.00	5.45	8.20	5.67	2.75	.099
		Men (Trainees) - 1966	2639	6.70	0.01	0.35	0.00	5.45	7.96	5.26	2.51	.097
		Men (Trainees) - 1977	102	6.89	0.03	0.29	0.02	6.22	7.68	4.21	1.46	.101
	Women - 1977	216	6.76	0.03	0.37	0.02	5.83	8.23	5.47	2.40	.105	
83	Tragion to back of head											
		Men - 1966	6682	4.05	0.01	0.47	0.00	2.70	5.76	11.58	3.06	.059
		Men (Trainees) - 1966	2639	3.99	0.01	0.45	0.01	2.70	5.36	11.39	2.66	.058
		Men (Trainees) - 1977	102	4.06	0.03	0.28	0.02	3.23	4.72	6.90	1.49	.059
	Women - 1977	216	3.95	0.02	0.36	0.02	3.31	5.31	9.11	2.00	.062	
84	Head Breadth											
		Men - 1946	24,447	5.99	0.00	0.23	0.00	4.92	7.09	3.84	2.17	.087
		Men - 1966	6682	6.01	0.00	0.23	0.00	5.06	6.86	3.83	1.80	.087
		Men (Trainees) - 1966	2639	6.01	0.00	0.22	0.00	5.22	6.86	3.70	1.64	.087
		Men (Trainees) - 1977	287	5.93	0.01	0.21	0.01	5.39	6.57	3.54	1.18	.087
		Women - 1946	8118	5.73	0.00	0.22	0.00	4.88	6.57	3.76	1.69	.090
	Women - 1977	1331	5.75	0.01	0.21	0.00	5.12	6.50	3.65	1.38	.090	

TABLE 26b. PERCENTILE VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	Percentiles in Inches										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		99th
HEAD AND FACE MEASUREMENTS (continued)													
80	Lip Protrusion to back of head												
	Men (Trainees) - 1977	7.09	7.17	7.64	7.76	7.95	8.19	8.46	8.78	8.98			
	Women - 1977			7.27	7.39	7.60	7.86	8.17	8.51	8.75	9.06	9.33	2.24
81	Menton to back of head												
	Men (Trainees) - 1977	6.77	6.85	7.32	7.44	7.64	7.91	8.23	8.54	8.74	8.66	8.82	2.05
	Women - 1977			7.02	7.15	7.37	7.63	7.94	8.24	8.44			
82	Ectocanthus to back of head												
	Men - 1966	5.93	6.03	6.18	6.30	6.52	6.78	7.05	7.30	7.44	7.58	7.66	1.73
	Men (Trainees) - 1966	5.91	6.01	6.15	6.27	6.46	6.69	6.93	7.17	7.31	7.47	7.57	1.66
	Men (Trainees) - 1977			6.42	6.50	6.69	6.89	7.09	7.24	7.36			
	Women - 1977	6.02	6.10	6.22	6.33	6.51	6.72	6.96	7.22	7.42	7.68	7.87	1.85
83	Tragion to back of head												
	Men - 1966	3.10	3.20	3.33	3.46	3.69	4.01	4.37	4.70	4.87	5.01	5.06	1.96
	Men (Trainees) - 1966	3.07	3.17	3.31	3.43	3.65	3.95	4.29	4.62	4.80	4.97	5.04	1.97
	Men (Trainees) - 1977			3.62	3.70	3.90	4.06	4.25	4.45	4.53			
	Women - 1977	3.39	3.39	3.47	3.55	3.70	3.91	4.16	4.42	4.61	4.88	5.08	
84	Head Breadth												
	Men - 1946	5.43	5.51	5.62	5.70	5.84	5.99	6.14	6.29	6.38	6.49	6.56	1.13
	Men - 1966	5.48	5.55	5.65	5.73	5.86	6.00	6.16	6.31	6.40	6.51	6.58	1.10
	Men (Trainees) - 1966	5.51	5.57	5.65	5.73	5.86	6.01	6.16	6.29	6.38	6.49	6.56	1.05
	Men (Trainees) - 1977			5.59	5.67	5.79	5.94	6.06	6.18	6.30			
	Women - 1946	5.19	5.27	5.38	5.46	5.60	5.74	5.87	6.00	6.08	6.18	6.25	1.06
	Women - 1977	5.28	5.34	5.42	5.49	5.61	5.74	5.89	6.03	6.12	6.24	6.32	1.04

TABLE 26a. STATISTICAL VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	N	Mean	SE(M)	S.D.	SE(3D)	V(%)	Values in Inches		Stature ratio
								Min.	Max.	
HEAD AND FACE MEASUREMENTS (continued)										
85	Bitrignon Breadth									
	Men - 1966	6682	5.31	0.00	0.22	0.00	4.18	4.47	6.15	1.68
	Men (Trainees) - 1966	2639	5.30	0.00	0.22	0.00	4.10	4.63	6.11	1.48
	Men (Trainees) - 1977	102	5.32	0.02	0.23	0.02	4.32	4.76	5.87	1.11
	Women - 1977	216	5.11	0.01	0.21	0.01	4.11	4.53	5.75	1.22
										.077
										.077
										.078
										.080
86	Head Height (Trignon-top of head)									
	Men - 1946	24,630	5.16	0.00	0.24	0.00	4.65	3.94	6.30	2.36
	Men - 1966	6682	5.21	0.00	0.31	0.00	5.99	3.96	6.31	2.35
	Men (Trainees) - 1966	2639	5.22	0.01	0.31	0.00	5.99	3.96	6.23	2.27
	Men (Trainees) - 1977	102	5.27	0.03	0.27	0.02	5.12	4.53	6.06	1.53
	Women - 1946	8114	5.18	0.00	0.35	0.00	6.82	3.94	6.46	2.62
	Women - 1977	216	5.19	0.02	0.26	0.01	5.01	4.41	6.14	1.73
										.075
										.076
										.076
										.077
										.081
										.081
87	Ectocanthus to top of head									
	Men (Trainees) - 1977	102	4.35	0.03	0.31	0.02	7.13	3.50	5.24	1.74
	Women - 1977	216	4.78	0.02	0.32	0.02	6.69	3.90	6.30	2.40
										.063
										.074
88	Glabella to top of head									
	Men (Trainees) - 1977	102	3.11	0.03	0.34	0.02	10.93	2.32	3.86	1.54
	Women - 1977	216	3.32	0.02	0.34	0.02	10.24	2.52	5.00	2.48
										.045
										.052
89	Sellion to top of head									
	Men (Trainees) - 1977	102	3.80	0.04	0.39	0.03	10.26	3.07	4.92	1.85
	Women - 1977	216	3.96	0.03	0.37	0.02	9.34	2.91	5.67	2.76
										.055
										.062
90	Pronasale to top of head									
	Men (Trainees) - 1977	102	5.17	0.04	0.42	0.03	8.12	4.29	6.42	2.13
	Women - 1977	216	5.33	0.03	0.39	0.02	7.32	4.33	7.09	2.76
										.075
										.083

TABLE 26b. PERCENTILE VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	Percentiles in Inches										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		99th
HEAD AND FACE MEASUREMENTS (continued)													
85	Bitragion Breadth												
	Men - 1966	4.80	4.86	4.95	5.03	5.16	5.31	5.46	5.60	5.69	5.78	5.85	1.05
	Men (Trainees) - 1966	4.79	4.85	4.94	5.02	5.15	5.30	5.44	5.58	5.66	5.76	5.82	1.03
	Men (Trainees) - 1977			4.92	5.00	5.16	5.31	5.47	5.63	5.71			
	Women - 1977	4.57	4.65	4.76	4.84	4.97	5.11	5.25	5.38	5.45	5.55	5.59	1.02
86	Head Height (Tragion-top of head)												
	Men - 1946	4.58	4.66	4.78	4.86	5.00	5.15	5.32	5.48	5.58	5.70	5.78	1.20
	Men - 1966	4.46	4.56	4.69	4.81	5.00	5.21	5.42	5.61	5.72	5.83	5.90	1.44
	Men (Trainees) - 1966	4.44	4.54	4.69	4.81	5.01	5.23	5.43	5.61	5.71	5.83	5.91	1.47
	Men (Trainees) - 1977			4.84	4.92	5.12	5.28	5.43	5.59	5.67			
	Women - 1946	4.34	4.43	4.58	4.72	4.94	5.19	5.41	5.62	5.75	5.92	6.04	1.70
	Women - 1977	4.65	4.68	4.77	4.86	5.02	5.19	5.37	5.52	5.62	5.75	5.83	1.18
87	Ectocanthus to top of head												
	Men (Trainees) - 1977			3.86	3.98	4.13	4.33	4.57	4.76	4.88			
	Women - 1977	4.02	4.13	4.27	4.38	4.57	4.78	4.98	5.17	5.26	5.35	5.39	1.37
88	Glabella to top of head												
	Men (Trainees) - 1977			2.56	2.68	2.87	3.11	3.39	3.54	3.70			
	Women - 1977	2.64	2.68	2.79	2.90	3.09	3.31	3.54	3.75	3.88	4.06	4.17	1.53
89	Sellion to top of head												
	Men (Trainees) - 1977			3.23	3.27	3.46	3.82	4.06	4.33	4.45			
	Women - 1977	3.15	3.23	3.37	3.49	3.72	3.97	4.20	4.41	4.52	4.65	4.76	1.61
90	Pronasale to top of head												
	Men (Trainees) - 1977			4.57	4.65	4.84	5.12	5.47	5.75	5.94			
	Women - 1977	4.49	4.57	4.70	4.83	5.07	5.34	5.60	5.83	5.96	6.10	6.18	1.69

TABLE 26a. STATISTICAL VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	N	Mean	SE(M)	S.D.	SE(SD)	V(%)	Values in Inches		Stature ratio
								Min.	Max.	
HEAD AND FACE MEASUREMENTS (continued)										
91	Subnasale to top of head									
	Men (Trainees) - 1977	102	5.70	0.04	0.38	0.03	6.67	4.80	6.77	1.97
	Women - 1977	216	5.83	0.03	0.37	0.02	6.35	4.92	7.64	2.72
										.083
										.091
92	Stomion to top of head									
	Men (Trainees) - 1977	102	6.64	0.04	0.39	0.03	5.87	5.67	7.64	1.97
	Women - 1977	216	6.63	0.03	0.40	0.02	6.03	5.67	8.58	2.91
										.097
										.103
93	Nenton to top of head									
	Men (Trainees) - 1977	102	8.40	0.04	0.39	0.03	4.64	7.48	9.45	1.97
	Women - 1977	216	8.22	0.03	0.40	0.02	4.87	7.28	9.88	2.60
										.123
										.128
94	Face Length (Menton-Sellion)									
	Men - 1946	24,494	4.92	0.00	0.28	0.00	5.69	3.94	6.30	2.36
	Men - 1966	6682	4.74	0.00	0.26	0.00	5.50	3.80	5.76	1.96
	Men (Trainees) - 1966	2639	4.72	0.01	0.26	0.00	5.49	3.80	5.76	1.96
	Men (Trainees) - 1977	102	4.61	0.03	0.27	0.02	5.86	4.02	5.20	1.18
	Women - 1946	8120	4.39	0.00	0.28	0.00	6.42	3.50	5.91	2.41
	Women - 1977	216	4.21	0.01	0.22	0.01	5.23	3.74	4.84	1.10
										.072
										.069
										.069
95	Menton-Crinion									
	Men (Trainees) - 1977	102	7.29	0.03	0.33	0.02	4.53	6.50	8.15	1.65
	Women - 1977	216	6.92	0.02	0.33	0.02	4.77	5.98	7.95	1.97
										.106
										.108
96	Minimum Frontal Breadth									
	Men - 1946	24,406	4.30	0.00	0.23	0.00	5.35	3.54	5.91	2.37
	Men (Trainees) - 1977	102	4.38	0.03	0.32	0.02	7.31	3.62	5.00	1.38
	Women - 1946	8118	3.96	0.00	0.23	0.00	5.89	2.95	4.76	1.81
	Women - 1977	216	4.14	0.01	0.20	0.01	4.83	3.62	4.80	1.18
										.063
										.064
										.062
										.065

TABLE 26b. PERCENTILE VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	Percentiles in Inches										Range 99th (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		
HEAD AND FACE MEASUREMENTS (continued)													
91	Subnasale to top of head												
	Men (Trainees) - 1977			5.12	5.24	5.43	5.67	5.98	6.22	6.38			
	Women - 1977	4.96	5.08	5.25	5.38	5.58	5.81	6.06	6.30	6.44	6.57	6.65	1.69
92	Stomion to top of head												
	Men (Trainees) - 1977			6.06	6.18	6.34	6.61	6.89	7.20	7.36			
	Women - 1977	5.79	5.87	5.99	6.12	6.36	6.62	6.88	7.10	7.24	7.40	7.52	1.73
93	Menton to top of head												
	Men (Trainees) - 1977			7.83	7.95	8.11	8.35	8.66	8.94	9.13			
	Women - 1977	7.36	7.44	7.59	7.72	7.94	8.21	8.48	8.74	8.89	9.06	9.17	1.81
94	Face Length (Menton-Sellion)												
	Men - 1946	4.27	4.35	4.47	4.56	4.72	4.91	5.11	5.29	5.40	5.52	5.60	1.33
	Men - 1966	4.14	4.21	4.31	4.41	4.56	4.73	4.91	5.07	5.17	5.29	5.37	1.23
	Men (Trainees) - 1966	4.12	4.20	4.31	4.40	4.54	4.71	4.88	5.06	5.16	5.28	5.35	1.23
	Men (Trainees) - 1977			4.17	4.25	4.41	4.61	4.80	4.96	5.04			
	Women - 1946	3.82	3.86	3.95	4.05	4.21	4.38	4.54	4.71	4.86	5.09	5.28	1.46
	Women - 1977	3.74	3.82	3.89	3.95	4.04	4.18	4.36	4.53	4.63	4.72	4.76	1.02
95	Menton-Crinion												
	Men (Trainees) - 1977			6.73	6.85	7.09	7.32	7.52	7.72	7.83			
	Women - 1977	6.18	6.26	6.38	6.50	6.70	6.92	7.14	7.34	7.46	7.60	7.68	1.50
96	Minimum Frontal Breadth												
	Men - 1946	3.78	3.83	3.92	4.00	4.14	4.30	4.46	4.61	4.70	4.82	4.90	1.12
	Men (Trainees) - 1977			3.90	3.98	4.13	4.41	4.65	4.80	4.88			
	Women - 1946	3.32	3.42	3.56	3.66	3.82	3.97	4.11	4.24	4.31	4.40	4.46	1.14
	Women - 1977	3.74	3.78	3.82	3.88	4.00	4.14	4.27	4.40	4.47	4.57	4.65	0.91

TABLE 26a. STATISTICAL VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

Values in Inches										
No.	Measurements	N	Mean	SE(M)	S.D.	SE(SD)	V(%)	Range		Stature ratio
								Min.	Max.	
HEAD AND FACE MEASUREMENTS (continued)										
97	Face Breadth (Bizygomatic)	24,389	5.47	0.00	0.24	0.00	4.39	4.33	6.50	2.17
	Men - 1946	6681	5.51	0.00	0.22	0.00	4.00	4.70	6.43	1.73
	Men (Trainees) - 1966	2638	5.49	0.00	0.21	0.00	3.90	4.78	6.19	1.41
	Men (Trainees) - 1977	102	4.42	0.02	0.21	0.01	3.87	4.92	5.83	0.91
	Women - 1946	8117	5.15	0.00	0.21	0.00	4.15	4.33	5.98	1.65
	Women - 1977	216	3.79	0.01	0.20	0.01	5.28	3.23	4.33	1.10
98	Biocular Breadth	24,361	3.63	0.00	0.20	0.00	5.51	2.76	4.72	1.96
	Men - 1946	102	3.98	0.02	0.19	0.01	4.77	3.43	4.49	1.06
	Men (Trainees) - 1977	8116	3.55	0.00	0.18	0.00	5.05	2.91	4.33	1.42
	Women - 1946	216	3.79	0.01	0.20	0.01	5.28	3.23	4.33	1.10
	Women - 1977									
99	Interpupillary Breadth	6680	2.41	0.00	0.16	0.00	6.51	1.87	3.12	1.25
	Men - 1966	2638	2.40	0.00	0.16	0.00	6.69	1.87	3.04	1.17
	Men (Trainees) - 1966	102	2.32	0.02	0.19	0.01	8.19	1.85	2.87	1.02
	Men (Trainees) - 1977	216	2.29	0.01	0.17	0.01	7.42	1.77	2.76	0.99
	Women - 1977									
100	Interocular Breadth	24,359	1.27	0.00	0.12	0.00	9.45	0.81	1.91	1.10
	Men - 1946	8116	1.24	0.00	0.12	0.00	9.65	0.79	1.73	0.94
	Women - 1946									
101	Nose Length (Subnasale-Sellion)	24,411	2.18	0.00	0.20	0.00	9.17	1.52	3.09	1.57
	Men - 1946	102	1.96	0.01	0.14	0.01	7.14	1.65	2.28	0.63
	Men (Trainees) - 1977	8115	1.89	0.00	0.22	0.00	11.62	0.98	3.43	2.45
	Women - 1946	216	1.80	0.01	0.13	0.01	7.22	1.46	2.20	0.74
	Women - 1977									

TABLE 26b. PERCENTILE VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	Percentiles in Inches										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		99th
HEAD AND FACE MEASUREMENTS (continued)													
97	Face Breadth (Bizygomatic)												
	Men - 1946	4.87	4.95	5.07	5.16	5.31	5.48	5.63	5.77	5.86	5.95	6.01	1.14
	Men - 1966	5.01	5.07	5.15	5.23	5.36	5.51	5.66	5.79	5.88	5.98	6.05	1.04
	Men (Trainees) - 1966	5.00	5.06	5.14	5.22	5.34	5.48	5.63	5.77	5.85	5.95	6.02	1.02
	Men (Trainees) - 1977			5.04	5.12	5.28	5.43	5.59	5.67	5.71			
	Women - 1946	4.62	4.69	4.79	4.87	5.01	5.15	5.29	5.41	5.48	5.57	5.64	1.02
	Women - 1977	4.68	4.72	4.83	4.92	5.07	5.21	5.34	5.45	5.53	5.63	5.75	1.07
98	Biocular Breadth												
	Men - 1946	3.14	3.20	3.29	3.35	3.48	3.62	3.78	3.90	3.99	4.08	4.15	1.01
	Men (Trainees) - 1977			3.66	3.74	3.86	3.98	4.13	4.21	4.29			
	Women - 1946	3.16	3.20	3.27	3.33	3.43	3.55	3.67	3.79	3.86	3.94	3.99	0.83
	Women - 1977	3.35	3.43	3.47	3.53	3.65	3.78	3.92	4.05	4.12	4.21	4.25	0.90
99	Interpupillary Breadth												
	Men - 1966	2.06	2.10	2.15	2.21	2.31	2.41	2.52	2.61	2.67	2.74	2.80	0.74
	Men (Trainees) - 1966	2.05	2.08	2.13	2.19	2.29	2.41	2.51	2.60	2.66	2.73	2.79	0.74
	Men (Trainees) - 1977			2.01	2.09	2.20	2.32	2.44	2.56	2.64			
	Women - 1977	1.93	1.93	2.00	2.06	2.17	2.29	2.41	2.51	2.57	2.64	2.72	0.79
100	Interocular Breadth												
	Men - 1946	1.00	1.05	1.09	1.13	1.20	1.27	1.35	1.43	1.49	1.58	1.62	0.62
	Women - 1946	0.96	1.00	1.05	1.10	1.17	1.24	1.32	1.40	1.45	1.50	1.55	0.59
101	Nose Length (Subnasale-Sellion)												
	Men - 1946	1.72	1.78	1.88	1.94	2.04	2.16	2.30	2.43	2.51	2.62	2.69	0.97
	Men (Trainees) - 1977			1.73	1.77	1.85	1.93	2.05	2.17	2.20			
	Women - 1946	1.45	1.50	1.58	1.66	1.78	1.88	1.98	2.12	2.26	2.52	2.76	1.31
	Women - 1977	1.50	1.54	1.61	1.65	1.72	1.80	1.89	1.98	2.03	2.09	2.09	0.59

TABLE 26a. STATISTICAL VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	N	Mean	SE(M)	S.D.	SE(SD)	V(%)	Range		Stature ratio
								Min.	Max.	
HEAD AND FACE MEASUREMENTS (continued)										
102	Nasal Root Breadth									
	Men - 1946	24,348	0.56	0.00	0.09	0.00	16.07	0.26	1.04	.008
	Women - 1946	8114	0.61	0.00	0.10	0.00	15.72	0.39	1.02	.010
103	Nose Breadth									
	Men - 1946	24,382	1.33	0.00	0.11	0.00	8.27	0.81	2.15	.019
	Men (Trainees) - 1977	102	1.46	0.02	0.19	0.01	13.01	1.10	1.89	.021
	Women - 1946	8119	1.23	0.00	0.11	0.00	9.26	0.79	1.73	.019
	Women - 1977	216	1.34	0.01	0.18	0.01	13.43	0.98	1.85	.021
104	Mouth Breadth, Smiling									
	Men (Trainees) - 1977	102	2.55	0.03	0.28	0.02	10.98	2.01	3.19	.037
	Women - 1977	216	2.31	0.01	0.22	0.01	9.52	1.77	2.99	.036
105	Ear Length									
	Men (Trainees) - 1977	102	2.45	0.02	0.17	0.01	6.94	1.93	2.83	.036
106	Ear Breadth									
	Men (Trainees) - 1977	102	1.71	0.01	0.14	0.01	8.19	1.34	2.09	.025

TABLE 26b. PERCENTILE VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	Percentiles in Inches										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		99th
HEAD AND FACE MEASUREMENTS (continued)													
102	Nasal Root Breadth												
	Men - 1946	0.38	0.39	0.41	0.44	0.50	0.56	0.63	0.69	0.73	0.77	0.80	0.42
	Women - 1946	0.41	0.43	0.47	0.49	0.55	0.61	0.68	0.74	0.78	0.83	0.87	0.46
103	Nose Breadth												
	Men - 1946	1.09	1.12	1.17	1.20	1.25	1.32	1.40	1.48	1.53	1.58	1.62	0.53
	Men (Trainees) - 1977			1.18	1.22	1.34	1.46	1.61	1.73	1.81			
	Women - 1946	0.97	1.00	1.05	1.10	1.16	1.23	1.29	1.37	1.42	1.50	1.57	0.60
	Women - 1977	1.02	1.06	1.13	1.16	1.21	1.30	1.42	1.63	1.70	1.77	1.81	0.79
104	Mouth Breadth, Smiling												
	Men (Trainees) - 1977			2.13	2.17	2.32	2.52	2.76	2.95	3.03			
	Women - 1977	1.85	1.89	1.95	2.03	2.16	2.31	2.47	2.60	2.67	2.76	2.80	0.95
105	Ear Length												
	Men (Trainees) - 1977			2.17	2.24	2.36	2.44	2.56	2.68	2.72			
106	Ear Breadth												
	Men (Trainees) - 1977			1.50	1.54	1.61	1.69	1.81	1.89	1.97			

TABLE 26a. STATISTICAL VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	N	Mean	SE(M)	S.D.	SE(ED)	V(%)	Range		Stature ratio
								Min.	Max.	
HAND MEASUREMENTS										
107	Hand Length									
	Men - 1946	24,487	7.58	0.00	0.36	0.00	4.75	5.91	9.06	3.15
	Men - 1966	6682	7.49	0.00	0.38	0.00	5.06	6.08	9.30	3.22
	Men (Trainees) - 1966	2639	7.50	0.01	0.36	0.00	4.79	6.44	9.26	2.82
	Men (Trainees) - 1977	287	7.48	0.02	0.39	0.02	5.21	6.26	8.54	2.28
	Women - 1946	8113	6.88	0.00	0.32	0.00	4.70	5.79	8.19	2.40
Women - 1977	1331	6.87	0.01	0.35	0.01	5.09	5.97	8.03	2.16	
108	Palm Length									
	Men - 1966	6682	4.17	0.00	0.25	0.00	5.93	3.17	5.29	2.12
	Men (Trainees) - 1966	2639	4.18	0.00	0.24	0.00	5.76	3.17	5.13	1.96
	Men (Trainees) - 1977	287	4.23	0.01	0.23	0.01	5.44	3.54	4.76	1.22
	Women - 1977	1331	3.89	0.01	0.21	0.00	5.40	3.23	4.57	1.34
109	Hand Breadth									
	Men - 1946	24,488	3.41	0.00	0.19	0.00	5.57	2.36	4.33	1.97
	Men - 1966	6681	3.50	0.00	0.19	0.00	5.52	2.78	4.22	1.44
	Men (Trainees) - 1966	2639	3.50	0.00	0.18	0.00	5.18	2.85	4.22	1.37
	Men (Trainees) - 1977	287	3.51	0.01	0.17	0.01	4.84	3.07	3.94	0.87
	Women - 1946	8113	3.03	0.00	0.20	0.00	6.57	2.48	3.90	1.42
Women - 1977	1331	3.08	0.00	0.15	0.00	4.87	2.60	3.58	0.98	
110	Hand Circumference									
	Men - 1966	6682	8.51	0.01	0.45	0.00	5.26	6.99	10.36	3.37
	Men (Trainees) - 1966	2639	8.50	0.01	0.44	0.01	5.19	7.15	10.29	3.14
	Men (Trainees) - 1977	287	8.31	0.02	0.39	0.02	4.69	7.13	9.45	2.32
	Women - 1977	1331	7.26	0.01	0.34	0.01	4.68	6.22	8.35	2.13

TABLE 26b. PERCENTILE VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	Percentiles in Inches										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		99th
HAND MEASUREMENTS													
107	Hand Length												
	Men - 1946	6.74	6.84	7.00	7.12	7.33	7.57	7.81	8.04	8.18	8.35	8.47	1.73
	Men - 1966	6.66	6.75	6.90	7.02	7.23	7.48	7.74	7.98	8.13	8.31	8.44	1.78
	Men (Trainees) - 1966	6.71	6.79	6.92	7.04	7.25	7.49	7.74	7.97	8.11	8.27	8.38	1.67
	Men (Trainees) - 1977			6.85	7.01	7.20	7.48	7.76	7.99	8.11			
	Women - 1946	6.11	6.21	6.35	6.47	6.66	6.87	7.10	7.31	7.45	7.61	7.72	1.61
108	Women - 1977	6.10	6.19	6.32	6.43	6.62	6.84	7.10	7.35	7.50	7.65	7.74	1.64
	Palm Length												
	Men - 1966	3.61	3.68	3.77	3.86	4.00	4.16	4.33	4.49	4.59	4.71	4.79	1.18
	Men (Trainees) - 1966	3.63	3.70	3.79	3.88	4.02	4.18	4.34	4.50	4.59	4.70	4.78	1.15
	Men (Trainees) - 1977			3.86	3.94	4.09	4.25	4.41	4.53	4.61			
	Women - 1977	3.45	3.49	3.56	3.63	3.75	3.88	4.03	4.16	4.24	4.33	4.40	0.95
109	Hand Breadth												
	Men - 1946	2.95	3.01	3.09	3.16	3.28	3.41	3.55	3.67	3.75	3.83	3.88	0.93
	Men - 1966	3.07	3.12	3.20	3.26	3.37	3.50	3.63	3.75	3.83	3.93	3.99	0.92
	Men (Trainees) - 1966	3.10	3.14	3.21	3.27	3.37	3.49	3.61	3.73	3.81	3.89	3.95	0.85
	Men (Trainees) - 1977			3.27	3.31	3.39	3.50	3.62	3.74	3.82			
	Women - 1946	2.63	2.68	2.75	2.80	2.89	3.00	3.14	3.30	3.40	3.53	3.62	0.99
110	Women - 1977	2.74	2.77	2.83	2.88	2.97	3.08	3.18	3.28	3.33	3.39	3.43	0.69
	Hand Circumference												
	Men - 1966	7.53	7.64	7.81	7.95	8.20	8.49	8.79	9.09	9.28	9.49	9.63	2.10
	Men (Trainees) - 1966	7.57	7.67	7.82	7.96	8.20	8.48	8.79	9.09	9.27	9.47	9.60	2.03
	Men (Trainees) - 1977			7.68	7.83	8.07	8.31	8.58	8.82	8.98			
	Women - 1977	6.51	6.59	6.71	6.83	7.02	7.26	7.49	7.70	7.82	7.95	8.02	1.51

TABLE 26a. STATISTICAL VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	N	Mean	SE(M)	S.D.	SE(ED)	V(%)	Range		Stature ratio
								Min.	Max.	
FOOT MEASUREMENTS										
111	Foot Length									
	Men - 1946	24,372	10.44	0.00	0.48	0.00	4.60	8.27	12.01	3.74
	Men - 1966	6682	10.54	0.01	0.51	0.00	4.86	8.41	12.77	4.36
	Men (Trainees) - 1966	2639	10.57	0.01	0.50	0.01	4.70	8.75	12.53	3.77
	Men (Trainees) - 1977	286	10.53	0.03	0.52	0.02	4.94	8.86	11.65	2.79
	Women - 1946	3321	9.42	0.01	0.44	0.01	4.62	7.87	10.98	3.11
	Women - 1977	1331	9.57	0.01	0.49	0.01	5.12	8.23	11.73	3.50
112	Instep Length									
	Men - 1946	24,475	7.61	0.00	0.44	0.00	5.78	5.51	9.65	4.14
	Men - 1966	6682	7.73	0.01	0.41	0.00	5.32	6.36	9.66	3.30
	Men (Trainees) - 1966	2639	7.74	0.01	0.40	0.01	5.11	6.44	9.26	2.82
	Men (Trainees) - 1977	286	7.76	0.03	0.46	0.02	5.93	6.61	9.06	2.45
	Women - 1946	1883	6.98	0.01	0.35	0.01	5.08	5.83	8.15	2.32
	Women - 1977	1331	7.03	0.01	0.39	0.01	5.55	5.91	8.46	2.55
113	Foot Breadth									
	Men - 1946	24,466	3.86	0.00	0.25	0.00	6.48	2.56	5.12	2.56
	Men - 1966	6682	3.87	0.00	0.22	0.00	5.56	3.13	4.81	1.68
	Men (Trainees) - 1966	2639	3.91	0.00	0.21	0.00	5.48	3.21	4.69	1.48
	Men (Trainees) - 1977	286	3.90	0.01	0.22	0.01	5.64	3.19	4.53	1.34
	Women - 1946	3324	3.56	0.00	0.22	0.00	6.27	2.87	4.41	1.54
	Women - 1977	1331	3.49	0.01	0.20	0.00	5.73	2.95	4.25	1.30
114	Heel Breadth									
	Men - 1946	24,341	2.64	0.00	0.21	0.00	7.95	1.58	3.94	2.36
	Men - 1966	6682	2.70	0.00	0.18	0.00	6.84	1.99	3.55	1.56
	Men (Trainees) - 1966	2639	2.69	0.00	0.18	0.00	6.56	2.03	3.55	1.52
	Women - 1946	3319	2.34	0.00	0.17	0.00	7.39	1.77	3.11	1.34
	Women - 1977	1331	2.40	0.00	0.16	0.00	6.67	1.97	2.99	1.02

TABLE 26b. PERCENTILE VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	Percentiles in Inches										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		99th
FOOT MEASUREMENTS													
111	Foot Length												
	Men - 1946	9.31	9.45	9.65	9.82	10.12	10.44	10.77	11.07	11.24	11.42	11.54	2.23
	Men - 1966	9.37	9.51	9.71	9.89	10.19	10.53	10.87	11.20	11.41	11.65	11.82	2.45
	Men (Trainees) - 1966	9.43	9.57	9.77	9.94	10.24	10.56	10.89	11.20	11.41	11.66	11.84	2.41
	Men (Trainees) - 1977			9.65	9.84	10.20	10.55	10.91	11.22	11.38			
	Women - 1946	8.46	8.58	8.75	8.89	9.12	9.40	9.70	9.99	10.17	10.38	10.52	2.06
	Women - 1977	8.50	8.62	8.80	8.96	9.23	9.55	9.89	10.22	10.42	10.65	10.81	2.31
112	Instep Length												
	Men - 1946	6.54	6.68	6.88	7.05	7.33	7.62	7.90	8.18	8.33	8.53	8.68	2.14
	Men - 1966	6.78	6.89	7.06	7.21	7.46	7.73	8.00	8.25	8.41	8.61	8.76	1.98
	Men (Trainees) - 1966	6.81	6.92	7.09	7.24	7.48	7.74	7.99	8.24	8.40	8.59	8.73	1.92
	Men (Trainees) - 1977			6.97	7.17	7.44	7.76	8.07	8.35	8.54			
	Women - 1946	6.14	6.25	6.41	6.54	6.75	6.97	7.21	7.44	7.67	7.74	7.84	1.70
	Women - 1977	6.17	6.27	6.41	6.54	6.76	7.02	7.28	7.54	7.70	7.89	8.02	1.85
113	Foot Breadth												
	Men - 1946	3.27	3.34	3.46	3.55	3.70	3.86	4.03	4.18	4.27	4.37	4.44	1.17
	Men - 1966	3.39	3.45	3.53	3.61	3.73	3.87	4.01	4.15	4.24	4.34	4.41	1.02
	Men (Trainees) - 1966	3.44	3.49	3.57	3.64	3.76	3.90	4.04	4.19	4.27	4.38	4.45	1.01
	Men (Trainees) - 1977			3.54	3.62	3.78	3.90	4.06	4.21	4.29			
	Women - 1946	3.07	3.12	3.21	3.28	3.41	3.56	3.71	3.85	3.94	4.04	4.11	1.04
	Women - 1977	3.04	3.09	3.17	3.24	3.35	3.49	3.62	3.75	3.83	3.93	4.00	0.96
114	Heel Breadth												
	Men - 1946	2.14	2.20	2.30	2.37	2.49	2.63	2.78	2.92	3.00	3.13	3.21	1.07
	Men - 1966	2.31	2.36	2.42	2.48	2.57	2.69	2.82	2.94	3.02	3.12	3.19	0.88
	Men (Trainees) - 1966	2.32	2.36	2.42	2.48	2.57	2.68	2.81	2.93	3.00	3.09	3.15	0.83
	Women - 1946	1.98	2.02	2.08	2.13	2.22	2.33	2.45	2.57	2.65	2.74	2.81	0.83
	Women - 1977	2.05	2.09	2.15	2.20	2.28	2.38	2.50	2.61	2.69	2.77	2.82	0.77

TABLE 26a. STATISTICAL VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	N	Mean	SE(M)	S.D.	SE(SD)	V(%)	Values in Inches		Stature ratio
								Min.	Max.	
FOOT MEASUREMENTS (continued)										
115	Ball of Foot Circumference									
	Men - 1946	24,468	9.70	0.00	0.50	0.00	5.15	7.87	11.81	3.94
	Men - 1966	6682	9.85	0.01	0.58	0.01	5.92	7.30	12.37	5.07
	Men (Trainees) - 1966	2639	9.91	0.01	0.56	0.01	5.65	7.78	11.90	4.12
	Men (Trainees) - 1977	287	9.90	0.03	0.51	0.02	5.15	8.46	11.22	2.76
	Women - 1946	8108	8.62	0.01	0.45	0.00	5.24	7.28	10.35	3.07
	Women - 1977	1331	8.90	0.01	0.45	0.01	5.06	7.68	10.71	3.03
116	Instep Circumference									
	Men - 1966	6682	10.46	0.01	0.65	0.01	6.21	8.05	14.18	6.13
	Men (Trainees) - 1966	2639	10.56	0.01	0.65	0.01	6.13	8.21	12.77	4.56
	Women - 1977	1331	9.24	0.01	0.50	0.01	5.41	7.91	10.91	3.00
117	Heel-Ankle Circumference									
	Men - 1966	6682	13.43	0.01	0.65	0.01	4.86	11.08	16.03	4.95
	Men (Trainees) - 1966	2639	13.42	0.01	0.64	0.01	4.78	11.32	15.92	4.60
	Men (Trainees) - 1977	287	13.39	0.04	0.69	0.03	5.15	11.22	15.35	4.13
	Women - 1977	1331	12.12	0.02	0.57	0.01	4.70	10.55	14.21	3.66
118	Sphyrion Height									
	Men (Trainees) - 1977	286	2.91	0.01	0.24	0.01	8.25	2.17	3.70	1.53
	Women - 1977	1331	2.54	0.01	0.21	0.00	8.27	1.81	3.31	1.50
										.042
										.040

TABLE 26b. PERCENTILE VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

No.	Measurements	Percentiles in Inches										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		99th
FOOT MEASUREMENTS (continued)													
115	Ball of Foot Circumference												
	Men - 1946	8.55	8.68	8.88	9.05	9.35	9.69	10.05	10.35	10.55	10.77	10.92	2.37
	Men - 1966	8.37	8.57	8.86	9.10	9.48	9.87	10.24	10.58	10.78	11.02	11.18	2.81
	Men (Trainees) - 1966	8.51	8.71	8.98	9.20	9.55	9.92	10.29	10.63	10.83	11.05	11.19	2.68
	Men (Trainees) - 1977			9.13	9.29	9.57	9.88	10.24	10.59	10.79			
	Women - 1946	7.63	7.74	7.91	8.05	8.30	8.60	8.91	9.21	9.39	9.61	9.75	2.12
116	Instep Circumference												
	Men - 1966	8.97	9.16	9.43	9.65	10.02	10.43	10.88	11.31	11.56	11.85	12.03	3.06
	Men (Trainees) - 1966	9.11	9.26	9.50	9.72	10.11	10.55	11.00	11.40	11.64	11.91	12.09	2.98
	Women - 1977	8.20	8.30	8.46	8.62	8.90	9.22	9.56	9.90	10.11	10.36	10.54	2.34
	Heel-Ankle Circumference												
	Men - 1966	11.94	12.12	12.38	12.61	12.99	13.42	13.86	14.28	14.53	14.83	15.03	3.09
117	Men (Trainees) - 1966	11.93	12.11	12.38	12.61	12.99	13.40	13.83	14.25	14.50	14.80	15.01	3.08
	Men (Trainees) - 1977			12.32	12.56	12.95	13.35	13.86	14.33	14.57			
	Women - 1977	10.89	11.02	11.21	11.40	11.73	12.10	12.49	12.87	13.11	13.40	13.61	2.72
	Sphyrion Height												
	Men (Trainees) - 1977			2.52	2.60	2.76	2.91	3.07	3.23	3.31			
	Women - 1977	2.04	2.09	2.18	2.27	2.40	2.55	2.69	2.81	2.89	2.98	3.05	1.01

TABLE 25a. STATISTICAL VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

Age (years)	N	Mean	SE(M)	S.D.	SE(SD)	V($\frac{s}{d}$)	Range	
							Min.	Max.
Men - 1946	24,502	24.28	0.03	4.94	0.02	20.35	15.0	57.0
Men - 1966	6682	22.17	0.06	4.64	0.04	20.92	17.0	55.0
Men (Trainees) - 1966	2639	20.18	0.03	1.48	0.02	7.35	17.0	31.0
Men (Trainees) - 1977	287	19.66	0.14	2.29	0.10	11.65	16.0	30.0
Women - 1946	8118	27.30	0.06	5.57	0.04	20.40	16.0	52.0
Women - 1977	1331	23.10	0.15	5.40	0.13	23.38	17.0	60.0
								43.0
								42.0
								38.0
								14.0
								14.0
								36.0
								43.0

TABLE 25b. PERCENTILE VALUES FOR U. S. ARMY MEN AND WOMEN - 1946-1977 (continued)

Age (years)	Percentiles in Years										Range (1st-99th)	
	1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		99th
Men - 1946				percentiles not available								
Men - 1966	17.4	17.7	18.6	19.1	19.6	20.6	23.0	27.4	31.5	37.7	43.0	25.6
Men (Trainees) - 1966	17.0	17.5	18.1	18.6	19.2	20.0	20.9	22.1	23.0	24.3	25.3	8.3
Men (Trainees) - 1977			17.2	17.4	18.0	19.0	20.7	23.2	24.0			
Women - 1946	21.1	22.0	22.7	23.0	23.7	25.9	30.2	35.8	39.7	44.3	47.2	26.1
Women - 1977	17.2	17.4	17.7	18.0	19.1	22.0	25.1	29.3	33.6	40.0	45.7	28.5

6. U. S. ARMY WORKSPACE DATA

a. Workspace Measurements

Most anthropometric data are obtained by measuring individuals who are either standing or sitting in standardized positions. Further, subjects are usually measured either nude or nearly nude — men in only shorts and women in only bra and panties. Therefore, additional allowances for various combinations of clothing must be added to the anthropometric data when the data are used for design parameters in the human engineering of workspaces or seating.

In the recently-completed anthropometric survey of U. S. Army women, together with a series of U. S. Army men, data were obtained for weight, stature, and twelve workspace measurements. In this phase of the survey, 300 women and 106 men were measured. All of the subjects were wearing work clothing (Army fatigues) and combat boots when measured. The measurements taken included heights, reaches, and lengths. A new measurement was functional leg length; this was taken on seated subjects and measured from the back of the hip to the bottom of the boot heel, with the leg extended. The workspace measurements are described and illustrated in two of the technical reports on the anthropometric survey of U. S. Army women.^{19,20}

Selection of these particular workspace measurements was made from a group of measurements reported and illustrated in Military Standard: Human Engineering Design Criteria for Military Systems, Equipment and Facilities (MIL-STD-1472B).²¹ These measurements were derived from earlier work carried out by the U. S. Air Force in which workspace measurements were made on two small series of 40 and 53 men, respectively. Data from these studies and illustrations of the measurements may be found in two U. S. Air Force technical reports.^{22,23}

^{19,20}See references 10 and 12.

²¹See reference 16.

²²Hertzberg, H. T. E., I. Emanuel and M. Alexander. The anthropometry of working positions; 1. A preliminary study. WADC Technical Report 54-520, Aero Medical Laboratory, Wright-Patterson Air Force Base, Ohio, 1956. (AD 110 573)

²³Alexander, M., and C. E. Clauser. Anthropometry of common working positions. AMRL Technical Report 65-73, Aerospace Medical Research Laboratories, Wright-Patterson Air Force Base, Ohio, 1965. (AD 632 241)

b. Tables of Statistical and Percentile Values in Centimeters

In the following tables, statistical and percentile values are given for weight, stature, and twelve workspace measurements for both U. S. Army men and women. The tables of data for the workspace measurements are presented on two facing pages. On the first or upper page (Table 27a), the statistical values are given while on the second or lower facing page (Table 27b), the percentile values are shown. Due to the small size of the samples of Army men and women (106 and 300, respectively), only selected percentile values between the 5th and the 95th percentiles are given for the workspace measurements.

The statistical and percentile values shown in these tables are the same as those given in the source tables in a previous section (see page 18). In these tables, weight is given in kilograms, and data for all of the other measurements are shown in centimeters. Values for weight and stature taken without clothing are shown at the end of Table 27a for comparison with the values for men and women measured clothed.

Similar tables of statistical and percentile values for the workspace measurements given in inches may be found beginning on page 251.

TABLE 27a. STATISTICAL VALUES FOR U. S. ARMY MEN AND WOMEN - 1977

No.	Measurements	N	Mean	SE(M)	Values in Centimeters				Stature ratio
					S.D.	SE(SD)	V(%)	Range Min. Max.	
WORKSPACE MEASUREMENTS									
1	Weight - Clothed (kilograms)								
	Men (Trainees) - 1977	106	72.17	0.96	9.90	0.68	13.72	48.8	53.8
	Women - 1977	300	61.63	0.46	8.02	0.33	13.01	41.3	55.1
2	Stature - Clothed								
	Men (Trainees) - 1977	106	177.95	0.61	6.26	0.43	3.52	161.2	196.4
	Women - 1977	300	167.17	0.38	6.65	0.27	3.98	147.1	186.8
									1.000
									1.000
3	Functional Reach								
	Men (Trainees) - 1977	106	79.75	0.40	4.12	0.28	5.16	69.1	88.2
	Women - 1977	300	71.17	0.26	4.53	0.18	6.36	59.7	83.6
									.448
									.426
4	Functional Reach, Extended								
	Men (Trainees) - 1977	106	91.86	0.51	5.22	0.36	5.68	78.5	104.5
	Women - 1977	300	83.14	0.34	5.83	0.24	7.01	62.1	96.7
									.516
									.597
5	Overhead Reach Height								
	Men (Trainees) - 1977	106	215.10	0.91	9.42	0.65	4.38	185.5	239.2
	Women - 1977	300	199.18	0.52	9.04	0.37	4.54	172.6	227.0
									1.209
									1.191
6	Overhead Reach Breadth								
	Men (Trainees) - 1977	106	38.50	0.20	2.05	0.14	5.34	33.6	44.1
	Women - 1977	300	34.76	0.11	1.92	0.08	5.53	29.7	40.8
									.216
									.208

TABLE 27b. PERCENTILE VALUES FOR U. S. ARMY MEN AND WOMEN - 1977

No.	Measurements	Percentiles in Centimeters										Range 5th-95th
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th	
WORKSPACE MEASUREMENTS												
1	Weight - Clothed (kilograms)											
	Men (Trainees) - 1977			58.6	60.7	64.9	70.9	78.1	85.5	90.2		31.6
	Women - 1977			48.8	51.5	56.2	61.5	66.9	71.8	74.6		25.8
2	Stature - Clothed											
	Men (Trainees) - 1977			168.5	170.6	173.3	177.6	182.1	186.2	189.0		20.5
	Women - 1977			156.8	159.3	162.8	166.8	171.2	175.8	178.7		21.9
3	Functional Reach											
	Men (Trainees) - 1977			72.6	74.3	76.9	79.9	82.7	85.1	86.4		13.8
	Women - 1977			64.0	65.5	68.0	71.0	74.3	77.7	79.0		15.0
4	Functional Reach, Extended											
	Men (Trainees) - 1977			84.2	85.5	88.0	91.4	95.4	99.1	101.2		17.0
	Women - 1977			73.5	75.7	79.3	83.2	87.2	90.7	92.7		19.2
5	Overhead Reach Height											
	Men (Trainees) - 1977			200.4	203.5	208.8	215.1	221.6	227.4	230.5		30.1
	Women - 1977			185.3	188.6	193.2	198.6	205.0	211.5	215.1		29.8
6	Overhead Reach Breadth											
	Men (Trainees) - 1977			35.2	35.9	37.1	38.5	39.9	41.1	41.9		6.7
	Women - 1977			31.5	32.3	33.5	34.8	36.0	37.1	37.9		6.4

TABLE 27a. STATISTICAL VALUES FOR U. S. ARMY MEN AND WOMEN - 1977 (continued)

No.	Measurements	N	Values in Centimeters						Stature ratio		
			Mean	SE(M)	S.D.	SE(SD)	V(%)	Range			
								Min.		Max.	
WORKSPACE MEASUREMENTS (continued)											
7	Bent Torso Height										
	Men (Trainees) - 1977	106	137.28	0.71	7.27	0.50	5.30	120.3	152.7	32.4	.771
	Women - 1977	300	126.09	0.45	7.87	0.32	6.24	106.2	148.9	42.7	.754
8	Bent Torso Breadth										
	Men (Trainees) - 1977	106	44.72	0.22	2.25	0.15	5.03	37.8	51.8	14.0	.251
	Women - 1977	300	40.11	0.12	2.03	0.08	5.07	34.8	45.7	10.9	.240
9	Overhead Reach, Sitting										
	Men (Trainees) - 1977	106	136.88	0.57	5.85	0.40	4.27	118.9	153.8	34.9	.769
	Women - 1977	300	129.02	0.38	6.61	0.27	5.12	109.0	144.2	35.2	.772
10	Functional Leg Length										
	Men (Trainees) - 1977	106	118.55	0.51	5.24	0.36	4.42	105.2	131.6	26.4	.666
	Women - 1977	300	108.92	0.33	5.78	0.24	5.31	92.5	128.3	35.8	.652
11	Kneeling Height										
	Men (Trainees) - 1977	106	129.19	0.44	4.56	0.31	3.53	117.2	141.3	24.1	.726
	Women - 1977	300	122.05	0.27	4.75	0.19	3.89	107.6	137.1	29.5	.730
12	Kneeling Leg Length										
	Men (Trainees) - 1977	106	69.36	0.35	3.64	0.25	5.25	57.2	78.9	21.7	.390
	Women - 1977	300	64.82	0.20	3.47	0.14	5.35	54.2	75.3	21.1	.388

TABLE 27b. PERCENTILE VALUES FOR U. S. ARMY MEN AND WOMEN - 1977 (continued)

No.	Measurements	1st	2nd	5th	10th	Percentiles in Centimeters					99th	Range (5th-95th)	
						25th	Median 50th	75th	90th	95th			
WORKSPACE MEASUREMENTS (continued)													
7	Bent Torso Height Men (Trainees) - 1977 Women - 1977			125.6 112.7	127.7 115.5	131.8 120.6	137.1 126.3	142.7 131.5	147.4 135.9	149.8 138.6		24.2 25.9	
8	Bent Torso Breadth Men (Trainees) - 1977 Women - 1977			40.9 36.8	42.0 37.4	43.4 38.6	44.8 40.1	46.1 41.6	47.4 42.8	48.3 43.5		7.4 6.7	
9	Overhead Reach, Sitting Men (Trainees) - 1977 Women - 1977			127.9 117.4	130.4 120.3	133.5 124.8	136.7 129.3	140.3 133.6	144.3 137.3	146.9 139.4		19.0 22.0	
10	Functional Leg Length Men (Trainees) - 1977 Women - 1977			110.6 99.6	111.4 101.9	114.8 105.2	118.6 108.8	122.0 112.8	125.6 116.6	127.7 118.6		17.1 19.0	
11	Kneeling Height Men (Trainees) - 1977 Women - 1977			121.9 114.5	123.6 116.3	126.2 118.9	129.0 121.8	132.2 124.9	135.2 128.2	136.9 130.3		15.0 15.8	
12	Kneeling Leg Length Men (Trainees) - 1977 Women - 1977			63.9 59.2	65.0 60.3	67.0 62.4	69.5 64.8	71.6 67.1	74.1 69.2	75.5 70.5		11.6 11.3	

TABLE 27a. STATISTICAL VALUES FOR U. S. ARMY MEN AND WOMEN - 1977 (continued)

No.	Measurements	N	Values in Centimeters						Stature ratio	
			Mean	SE(M)	S.D.	SE(SD)	V(%)	Min.		Max.
WORKSPACE MEASUREMENTS (continued)										
13	Bent Knee Height, Supine									
	Men (Trainees) - 1977	106	49.06	0.26	2.69	0.18	5.48	41.7	54.9	21.7
	Women - 1977	300	45.49	0.15	2.56	0.10	5.62	37.7	55.5	17.8
14	Horiz. Length, Knees Bent									
	Men (Trainees) - 1977	106	161.20	0.65	6.71	0.46	4.16	148.6	175.1	26.5
	Women - 1977	300	150.92	0.41	7.14	0.29	4.73	125.0	169.5	44.5
Weight - Nude (kilograms)										
	Men (Trainees) - 1977	106	69.51	0.95	9.83	0.68	14.14	46.5	99.9	53.4
	Women - 1977	300	59.29	0.45	7.87	0.32	13.27	39.9	94.5	54.6
Stature - Nude										
	Men (Trainees) - 1977	106	174.09	0.63	6.44	0.44	3.70	156.2	193.0	36.8
	Women - 1977	300	163.63	0.38	6.67	0.27	4.08	143.6	182.5	38.9

TABLE 27b. PERCENTILE VALUES FOR U. S. ARMY MEN AND WOMEN - 1977 (continued)

No.	Measurements	Percentiles in Centimeters										Range (5th-95th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		99th
WORKSPACE MEASUREMENTS (continued)													
13	Bent Knee Height, Supine			44.7	45.5	47.1	49.0	51.0	52.7	53.5			8.8
	Men (Trainees) - 1977			41.3	42.3	43.8	45.5	47.2	48.7	49.6			8.3
	Women - 1977												
14	Horiz. Length, Knees Bent			150.8	152.5	155.9	160.8	166.2	170.8	173.0			22.2
	Men (Trainees) - 1977			140.3	142.6	146.1	150.4	155.5	160.7	163.8			23.5
	Women - 1977												

c. Tables of Statistical and Percentile Values in Inches

In the following tables, statistical and percentile values are given for weight, stature, and twelve workspace measurements for both U. S. Army men and women. The tables of data for the workspace measurements are presented on two facing pages. On the first or upper page (Table 28a), the statistical values are given, while on the second or lower facing page (Table 28b), the percentile values are shown. Due to the small size of the samples of Army men and women (106 and 300, respectively), only selected percentile values between the 5th and the 95th percentiles are given for the workspace measurements.

The statistical and percentile values shown in these tables are the same as those given in the source tables in a previous section (see page 18). In these tables, weight is given in pounds, and data for all of the other measurements are shown in inches. Values for weight and stature taken without clothing are shown at the end of Table 28a for comparison with the values for men and women measured clothed.

TABLE 28a. STATISTICAL VALUES FOR U. S. ARMY MEN AND WOMEN - 1977

No.	Measurements	N	Mean	SE(M)	S.D.	SE(SD)	V(%)	Values in Inches			Stature ratio
								Min.	Max.	Total	
WORKSPACE MEASUREMENTS											
1	Weight - Clothed (pounds)										
	Men (Trainees) - 1977	106	159.10	2.12	21.83	1.50	13.72	107.5	226.3	118.8	
	Women - 1977	300	135.86	1.02	17.68	0.72	13.01	91.0	212.5	121.5	
2	Stature - Clothed										
	Men (Trainees) - 1977	106	70.06	0.24	2.46	0.17	3.51	63.5	77.3	13.8	1.000
	Women - 1977	300	65.81	0.15	2.62	0.11	3.98	57.9	73.5	15.6	1.000
3	Functional Reach										
	Men (Trainees) - 1977	106	31.40	0.16	1.62	0.11	5.16	27.2	34.7	7.5	.448
	Women - 1977	300	28.02	0.10	1.78	0.07	6.35	23.5	32.9	9.4	.426
4	Functional Reach, Extended										
	Men (Trainees) - 1977	106	36.17	0.20	2.06	0.14	5.70	30.9	41.1	10.2	.516
	Women - 1977	300	32.73	0.13	2.29	0.09	7.00	24.4	38.1	13.7	.497
5	Overhead Reach Height										
	Men (Trainees) - 1977	106	84.69	0.36	3.71	0.25	4.38	73.0	94.2	21.2	1.209
	Women - 1977	300	78.42	0.21	3.56	0.15	4.54	68.0	89.4	21.4	1.192
6	Overhead Reach Breadth										
	Men (Trainees) - 1977	106	15.16	0.08	0.81	0.06	5.34	13.2	17.4	4.2	.216
	Women - 1977	300	13.69	0.04	0.76	0.03	5.55	11.7	16.1	4.4	.208

TABLE 28b. PERCENTILE VALUES FOR U. S. ARMY MEN AND WOMEN - 1977

No.	Measurements	Percentiles in Inches									Range 99th (5th-95th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th		98th
WORKSPACE MEASUREMENTS												
1	Weight - Clothed (pounds) Men (Trainees) - 1977 Women - 1977			129.1 107.6	133.8 113.6	143.1 123.9	156.3 135.6	172.2 147.6	188.5 158.3	198.8 164.5		69.7 56.9
2	Stature - Clothed Men (Trainees) - 1977 Women - 1977			66.4 61.8	67.2 62.7	68.2 64.1	69.9 65.6	71.7 67.4	73.3 69.2	74.4 70.3		8.0 8.5
3	Functional Reach Men (Trainees) - 1977 Women - 1977			28.6 25.2	29.2 25.8	30.3 26.8	31.5 28.0	32.6 29.2	33.5 30.4	34.0 31.1		5.4 5.9
4	Functional Reach, Extended Men (Trainees) - 1977 Women - 1977			33.2 28.9	33.7 29.8	34.7 31.2	36.0 32.8	37.6 34.3	39.0 35.7	39.8 36.5		6.6 7.6
5	Overhead Reach Height Men (Trainees) - 1977 Women - 1977			78.9 73.0	80.1 74.2	82.2 76.1	84.7 78.2	87.2 80.7	89.5 83.3	90.8 84.7		11.9 11.7
6	Overhead Reach Breadth Men (Trainees) - 1977 Women - 1977			13.9 12.4	14.1 12.7	14.6 13.2	15.2 13.7	15.7 14.2	16.2 14.6	16.5 14.9		2.6 2.5

TABLE 28a. STATISTICAL VALUES FOR U. S. ARMY MEN AND WOMEN - 1977 (continued)

No.	Measurements	N	Values in Inches							Range		Stature ratio
			Mean	SE(M)	S.D.	SE(SD)	V(%)	Min.	Max.	Total		
WORKSPACE MEASUREMENTS (continued)												
7	Bent Torso Height											
	Men (Trainees) - 1977	106	54.05	0.28	2.86	0.20	5.34	47.4	60.1	12.7	.771	
	Women - 1977	300	49.64	0.18	3.10	0.13	6.24	41.8	58.6	16.8	.754	
8	Bent Torso Breadth											
	Men (Trainees) - 1977	106	17.61	0.09	0.88	0.06	5.00	14.9	20.4	5.5	.251	
	Women - 1977	300	15.79	0.05	0.80	0.03	5.07	13.7	18.0	4.3	.240	
9	Overhead Reach, Sitting											
	Men (Trainees) - 1977	106	53.89	0.22	2.30	0.16	4.27	46.8	60.6	13.8	.769	
	Women - 1977	300	50.80	0.15	2.60	0.11	5.12	42.9	56.8	13.9	.772	
10	Functional Leg Length											
	Men (Trainees) - 1977	106	46.67	0.20	20.6	0.14	4.41	41.4	51.8	10.4	.666	
	Women - 1977	300	42.88	0.13	2.28	0.09	5.32	37.4	51.5	14.1	.652	
11	Kneeling Height											
	Men (Trainees) - 1977	106	50.86	0.17	1.79	0.12	3.52	46.1	55.6	9.5	.726	
	Women - 1977	300	48.05	0.11	1.87	0.08	3.89	42.4	54.0	11.6	.730	
12	Kneeling Leg Length											
	Men (Trainees) - 1977	106	27.31	0.14	1.43	0.10	5.24	22.5	31.1	8.6	.390	
	Women - 1977	300	25.52	0.08	1.37	0.06	5.37	21.3	29.6	8.3	.388	

TABLE 28b. PERCENTILE VALUES FOR U. S. ARMY MEN AND WOMEN - 1977 (continued)

No.	Measurements	Percentiles in Inches									Range (5th-95th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th		98th
WORKSPACE MEASUREMENTS (continued)												
7	Bent Torso Height											
	Men (Trainees) - 1977			49.4	50.3	51.9	54.0	56.2	58.1	59.0		9.6
	Women - 1977			44.4	45.5	47.5	49.7	51.8	53.5	54.6		10.2
8	Bent Torso Breadth											
	Men (Trainees) - 1977			16.1	16.5	17.1	17.6	18.2	18.7	19.0		2.9
	Women - 1977			14.5	14.7	15.2	15.8	16.4	16.8	17.1		2.6
9	Overhead Reach, Sitting											
	Men (Trainees) - 1977			50.3	51.3	52.6	53.8	55.2	56.8	57.9		7.6
	Women - 1977			46.2	47.4	49.1	50.9	52.6	54.0	54.9		8.7
10	Functional Leg Length											
	Men (Trainees) - 1977			43.5	43.9	45.2	46.7	48.0	49.5	50.3		6.8
	Women - 1977			39.2	40.1	41.4	42.8	44.4	45.9	46.7		7.5
11	Kneeling Height											
	Men (Trainees) - 1977			48.0	48.7	49.7	50.8	52.0	53.2	53.9		5.9
	Women - 1977			45.1	45.8	46.8	48.0	49.2	50.5	51.3		6.2
12	Kneeling Leg Length											
	Men (Trainees) - 1977			25.2	25.6	26.4	27.3	28.2	29.2	29.7		4.5
	Women - 1977			23.3	23.7	24.6	25.5	26.4	27.2	27.8		4.5

TABLE 28a. STATISTICAL VALUES FOR U. S. ARMY MEN AND WOMEN - 1977 (continued)

No.	Measurements	N	Values in Inches							Stature ratio
			Mean	SE(M)	S.D.	SE(SD)	V(%)	Range		
								Min.	Max.	
WORKSPACE MEASUREMENTS (continued)										
13	Bent Knee Height, Supine									
	Men (Trainees) - 1977	106	19.31	0.10	1.06	0.07	5.49	16.4	21.6	5.2
	Women - 1977	300	17.91	0.06	1.01	0.04	5.64	14.8	21.8	7.0
14	Horiz. Length, Knees Bent									
	Men (Trainees) - 1977	106	63.46	0.26	2.64	0.18	4.16	58.5	68.9	10.4
	Women - 1977	300	59.42	0.16	2.81	0.11	4.73	49.2	66.7	17.5
	Weight - Nude (pounds)									
	Men (Trainees) - 1977	106	153.24	2.10	21.67	1.49	14.14	102.5	220.3	117.8
	Women - 1977	300	130.71	1.00	17.34	0.71	13.27	88.0	208.3	120.3
	Stature - Nude									
	Men (Trainees) - 1977	106	68.54	0.25	2.53	0.17	3.69	61.5	76.0	14.5
	Women - 1977	300	64.42	0.15	2.63	0.11	4.08	56.5	71.8	15.3

TABLE 28b. PERCENTILE VALUES FOR U. S. ARMY MEN AND WOMEN - 1977 (continued)

No.	Measurements	Percentiles in Inches										Range 99th (5th-99th)
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th	
WORKSPACE MEASUREMENTS (continued)												
13	Bent Knee Height, Supine											
	Men (Trainees) - 1977			17.6	17.9	18.5	19.3	20.1	20.7	21.1		3.5
	Women - 1977			16.3	16.6	17.2	17.9	18.6	19.2	19.5		3.2
14	Horiz. Length, Knees Bent											
	Men (Trainees) - 1977			59.4	60.0	61.4	63.3	65.4	67.2	68.1		8.7
	Women - 1977			55.2	56.1	57.5	59.2	61.2	63.3	64.5		9.3

7. ANALYSIS AND DISCUSSION OF THE DATA

One of the main reasons for the presentation of anthropometric data in the standardized format of this report is to facilitate comparisons of data among the various Army source series which are included here. Comparisons of anthropometric data may be made to indicate any changes in body size which may have occurred in the Army population over a period of time. Three such comparisons are discussed here. These are comparisons between Army men measured in 1946 and Army men measured in 1966, between Army male basic trainees measured in 1966 and 1977, and between Army women of 1946 and Army women of 1977. Of even greater interest and importance is a comparison of the data on body size between Army men of 1966 and Army women of 1977.

a. U. S. Army Men – 1946 and 1966

A total of 105,062 U. S. Army men were measured in 1946, of which 25,00 men were used as a working series. These men were primarily separatenes leaving the army at the termination of World War II. For comparison, 6,682 Army men were measured in 1966, twenty years later. The 1946 series represented the World War II Army, while the 1966 series was drawn from an Army which was engaged in Vietnam.

Statistical and percentile values for selected body measurements of the 1946 and 1966 Army men are presented in Tables 29a and 29b, respectively, in centimeters, and in Tables 30a and 30b, respectively, in inches. Comparisons of any other body measurements of Army men may be made from the anthropometric data presented in the tables given in a previous section of the report.

There has been a great deal of speculation to the effect that men and women are rapidly and greatly increasing on body size. The anthropometric data presented here to not support these speculations, since on the average the changes in body size of Army men over a period of twenty years have been relatively small.

Army men measured in 1966 were about two years younger on the average than the men measured in 1946. The 1966 men were 2.01 kg (4.29 lb) heavier and 0.61 cm (0.24 in) taller on the average than the 1946 men. Crotch height was 0.52 cm (0.21 in) greater for the 1966 men, but sitting height showed virtually no change. The 1966 Army men were 1.36 cm (0.54 in) larger in chest circumference, 2.56 cm (1.01 in) larger in waist circumference, and 1.07 cm (0.42 in) larger in hip circumference on the average than the 1946 men. These increases in the girth dimensions are a reflection of the increase of 2 kg (4½ lb) in body weight. The stature ratios for these three circumferences also are slightly higher for the 1966 men.

Since this comparison is based upon a very large series (1946) and a much smaller series (1966), the standard deviations of the measurements are larger for the 1966 men, indicating a greater range of variation. The standard errors and the coefficients of variation also are larger for the 1966 series, as would be expected.

While the mean (or average) values for selected body measurements were slightly higher for the 1966 Army men, a greater contrast in body size may be seen in the percentile values. At the 95th percentile level, the 1966 men were 4.4 kg (10.2 lb) heavier and 1.2 cm (0.5 in) taller than the 1946 men. Crotch height was 0.8 cm (0.3 in) higher for the 1966 men at the 95th percentile, but sitting height was practically the same. At the 95th percentile level, chest circumference was 3.0 cm (1.2 in) larger, waist circumference was 5.0 cm (2.0 in) larger, and hip circumference was 2.6 cm (1.1 in) larger for the 1966 men, again reflecting the 4.4 kg (10.2 lb) increase in body weight. The range in percentile values (99th percentile minus 1st percentile) also was greater for the 1966 Army men.

A comparison of anthropometric data for 1946 and 1966 Army men thus does not show any great changes or increases in body size during the 20-year period. Mean stature increased only one-quarter of an inch and mean weight increased four and one-quarter pounds. These are very slight increases which certainly do not indicate large changes in body size. The anthropometric data do show some increases in the percentile values for body measurements, particularly at the 95th percentile level. This does indicate an increase in the proportion or numbers of larger men in the Army population.

TABLE 29a. STATISTICAL VALUES FOR U. S. ARMY MEN - 1946 and 1966

No.	Measurements	Values in Centimeters							Stature ratio
		N	Mean	SE(M)	S.D.	SE(SD)	V(%)	Range Min. Max.	
1	Weight (kilograms)								
	Men - 1946	24,506	70.22	0.06	9.32	0.04	13.29	43.1 138.3	95.2
	Men - 1966	6677	72.23	0.13	10.60	0.09	14.68	45.2 128.7	83.5
2	Stature								
	Men - 1946	24,508	173.91	0.04	6.39	0.03	3.67	150.0 200.0	50.0
	Men - 1966	6682	174.52	0.08	6.61	0.06	3.79	151.8 199.7	47.9
3	Crotch Height								
	Men - 1946	24,497	83.42	0.03	4.45	0.02	5.33	65.0 101.0	36.0
	Men - 1966	6682	83.94	0.06	4.67	0.04	5.57	64.8 101.7	36.9
4	Sitting Height								
	Men - 1946	24,352	90.88	0.02	3.41	0.01	3.75	77.0 105.0	28.0
	Men - 1966	6682	90.69	0.04	3.66	0.03	4.04	77.2 103.2	26.0
5	Chest Circumference								
	Men - 1946	24,470	92.41	0.04	5.96	0.02	6.45	71.0 123.0	52.0
	Men - 1966	6682	93.77	0.08	6.69	0.06	7.13	71.8 124.2	52.4
6	Waist Circumference								
	Men - 1946	24,472	77.73	0.04	7.01	0.03	9.02	59.0 119.0	60.0
	Men - 1966	6682	80.29	0.10	8.18	0.07	10.19	58.8 127.7	68.9
7	Hip (Buttock) Circumference								
	Men - 1946	24,500	93.14	0.04	5.70	0.02	6.12	67.0 127.0	60.0
	Men - 1966	6682	94.21	0.08	6.25	0.05	6.63	77.2 134.2	57.0
	Age (years)								
	Men - 1946	24,502	24.28	0.03	4.94	0.02	20.35	15.0 57.0	42.0
	Men - 1966	6682	22.17	0.06	4.64	0.04	20.92	17.0 55.0	38.0

TABLE 29b. PERCENTILE VALUES FOR U. S. ARMY MEN - 1946 and 1966

No.	Measurements	Percentiles in Centimeters										Range 99th (1st-99th)
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th	
1	Weight (kilograms)											
	Men - 1946	51.9	53.5	56.4	59.0	64.0	69.4	75.7	82.1	87.0	93.0	97.5
	Men - 1966	52.6	54.5	57.4	60.0	64.8	71.0	78.4	86.3	91.6	98.3	103.0
												45.6
												50.4
2	Stature											
	Men - 1946	159.3	160.8	163.3	165.9	169.7	174.0	178.3	182.4	184.4	187.2	189.2
	Men - 1966	158.9	160.9	163.8	166.2	170.1	174.4	178.9	183.0	185.6	188.4	190.3
												29.9
												31.4
3	Crotch Height											
	Men - 1946	73.2	74.4	76.2	77.7	80.5	83.3	86.4	89.2	90.9	93.0	94.5
	Men - 1966	72.8	74.2	76.3	78.0	80.8	83.9	87.0	89.9	91.7	93.7	95.1
												21.3
												22.3
4	Sitting Height											
	Men - 1946	82.6	83.6	85.1	86.4	88.4	90.9	93.2	95.2	96.5	98.0	99.1
	Men - 1966	82.0	83.0	84.5	85.9	88.2	90.8	93.2	95.4	96.7	98.2	99.2
												16.5
												17.2
5	Chest Circumference											
	Men - 1946	80.3	81.5	83.6	85.3	88.4	91.9	96.0	100.1	102.9	106.4	109.2
	Men - 1966	80.9	82.2	84.1	85.9	89.1	93.0	97.7	102.6	105.9	109.9	112.8
												28.9
												31.9
6	Waist Circumference											
	Men - 1946	65.0	66.3	68.3	69.8	72.9	76.7	81.3	86.6	90.9	95.8	99.3
	Men - 1966	66.3	67.7	69.7	71.3	74.5	78.9	84.7	91.4	95.9	101.6	105.6
												34.3
												39.3
7	Hip (Buttock) Circum.											
	Men - 1946	80.5	82.0	84.6	86.4	89.2	92.7	96.5	100.3	102.9	106.2	108.7
	Men - 1966	82.0	83.3	85.1	86.8	89.8	93.6	97.9	102.5	105.5	109.3	112.0
												28.2
												30.0
Age (years)		percentiles not available										
	Men - 1946	17.4	17.7	18.6	19.1	19.6	20.6	23.0	27.4	31.5	37.7	43.0
	Men - 1966											25.6

TABLE 30a. STATISTICAL VALUES FOR U. S. ARMY MEN - 1946 and 1966

Values in Inches										
No.	Measurements	N	Mean	SE(M)	S.D.	SE(SD)	V(%)	Range		Stature ratio
								Min.	Max.	
1	Weight (pounds)									
	Men - 1946	24,506	154.81	0.13	20.56	0.09	13.28	95.0	305.0	210.0
	Men - 1966	6677	159.10	0.29	23.35	0.20	14.68	99.5	283.5	184.0
2	Stature									
	Men - 1946	24,508	68.47	0.02	2.52	0.01	3.68	59.1	78.7	19.6
	Men - 1966	6682	68.71	0.03	2.60	0.02	3.79	59.7	78.6	18.9
3	Crotch Height									
	Men - 1946	24,497	32.84	0.01	1.75	0.01	5.33	25.6	39.8	14.2
	Men - 1966	6682	33.05	0.02	1.84	0.02	5.57	25.5	40.0	14.5
4	Sitting Height									
	Men - 1946	24,352	35.78	0.01	1.34	0.01	3.74	30.3	41.3	11.0
	Men - 1966	6682	35.70	0.02	1.44	0.01	4.04	30.4	40.6	10.2
5	Chest Circumference									
	Men - 1946	24,470	36.38	0.01	2.34	0.01	6.43	28.0	48.4	20.4
	Men - 1966	6682	36.92	0.03	2.63	0.02	7.13	28.2	48.9	20.7
6	Waist Circumference									
	Men - 1946	24,472	30.60	0.02	2.76	0.01	9.02	23.2	46.8	23.6
	Men - 1966	6682	31.61	0.04	3.22	0.03	10.19	23.1	50.3	27.2
7	Hip (Buttock) Circumference									
	Men - 1946	24,500	36.67	0.01	2.24	0.01	6.11	26.4	50.0	23.6
	Men - 1966	6682	37.09	0.03	2.46	0.02	6.63	30.4	52.8	22.4
	Age (years)									
	Men - 1946	24,502	24.28	0.03	4.94	0.02	20.35	15.0	57.0	42.0
	Men - 1966	6682	22.17	0.06	4.64	0.04	20.92	17.0	55.0	38.0

TABLE 30b. PERCENTILE VALUES FOR U. S. ARMY MEN - 1946 and 1966

No.	Measurements	Percentiles in Inches										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		99th
1	Weight (pounds)												
	Men - 1946	114.4	118.0	124.3	130.0	141.0	152.9	167.0	181.0	191.7	205.0	214.9	100.5
	Men - 1966	116.0	120.1	126.3	132.1	142.6	156.3	172.6	190.1	201.9	216.5	226.9	110.9
2	Stature												
	Men - 1946	62.7	63.3	64.3	65.3	66.8	68.5	70.2	71.8	72.6	73.7	74.5	11.8
	Men - 1966	62.6	63.4	64.5	65.4	67.0	68.7	70.4	72.1	73.1	74.2	74.9	12.3
3	Crotch Height												
	Men - 1946	28.8	29.3	30.0	30.6	31.7	32.8	34.0	35.1	35.8	36.6	37.2	8.4
	Men - 1966	28.6	29.2	30.0	30.7	31.8	33.0	34.3	35.4	36.1	36.9	37.4	8.8
4	Sitting Height												
	Men - 1946	32.5	32.9	33.5	34.0	34.8	35.8	36.7	37.5	38.0	38.6	39.0	6.5
	Men - 1966	32.3	32.7	33.3	33.8	34.7	35.7	36.7	37.6	38.1	38.6	39.0	6.7
5	Chest Circumference												
	Men - 1946	31.6	32.1	32.9	33.6	34.8	36.2	37.8	39.4	40.5	41.9	43.0	11.4
	Men - 1966	31.8	32.4	33.1	33.8	35.1	36.6	38.5	40.4	41.7	43.3	44.4	12.6
6	Waist Circumference												
	Men - 1946	25.6	26.1	26.9	27.5	28.7	30.2	32.0	34.1	35.8	37.7	39.1	13.5
	Men - 1966	26.1	26.7	27.4	28.1	29.3	31.0	33.4	36.0	37.8	40.0	41.6	15.5
7	Hip (Buttock) Circum.												
	Men - 1946	31.7	32.3	33.3	34.0	35.1	36.5	38.0	39.5	40.5	41.8	42.8	11.1
	Men - 1966	32.3	32.8	33.5	34.2	35.4	36.8	38.6	40.4	41.6	43.0	44.1	11.8
Age (years)		percentiles not available											
	Men - 1946	17.4	17.7	18.6	19.1	19.6	20.6	23.0	27.4	31.5	37.7	43.0	25.6
	Men - 1966												

b. U. S. Army Men (Basic Trainees) — 1966 and 1977

The group of 2,639 U. S. Army basic trainees was measured in 1966. These young men consisted of draftees and Regular Army enlistees who were beginning their Army basic training. At the end of the anthropometric survey of U. S. Army women in 1977, a sample of 287 Army men was measured in order to obtain data which would be directly comparable with the data on women. These men were volunteers, also just beginning their Army basic training. A comparison of the data on these two groups of basic trainees will give some indication of the body size of young men who are entering Army service.

Statistical and percentile values for selected body measurements of the 1966 and 1977 series of Army basic trainees are presented in Tables 31a and 31b, respectively, in centimeters, and in Tables 32a and 32b, respectively, in inches. Comparisons of any other body measurements of Army male basic trainees may be made from the anthropometric data presented in the tables given in a previous section of this report.

The 1977 basic trainees were about one year younger on the average than the 1966 basic trainees. The two groups of trainees had the same body weight, but the 1966 trainees were 0.62 cm (0.25 in) taller on the average. Crotch height was not measured on the 1977 trainees, but they were 1.88 cm (0.74 in) shorter in sitting height than the 1966 trainees. In body girths, the two groups of trainees were similar in chest circumference; however, the 1977 trainees were 0.72 cm (0.28 in) smaller in waist circumference and 1.69 cm (0.67 in) larger in hip circumference than the 1966 trainees.

Due to the small sample size of less than 300 men measured in 1977, only the 5th and 95th percentile values are given for this group of basic trainees. At the 95th percentile level, the 1977 trainees were 0.5 kg (1.2 lb) heavier, but the 95th percentile value for stature was the same for the two groups. The 95th percentile value for sitting height was 1.5 cm (0.6 in) less for the 1977 trainees. At the 95th percentile level, chest circumference was 1.1 cm (0.5 in) larger, waist circumference was 0.4 cm (0.2 in) larger, and hip circumference was 1.7 cm (0.7 in) larger for the 1977 trainees.

Thus only very slight differences in body size are indicated by the anthropometric data on 1966 and 1977 Army male basic trainees.

TABLE 31a. STATISTICAL VALUES FOR U. S. ARMY MEN (BASIC TRAINEES) - 1966 and 1977

No.	Measurements	N	Mean	SE(M)	S.D.	SE(SD)	V(%)	Range		Stature ratio
								Min.	Max.	
Values in Centimeters										
1	Weight (kilograms)									
	Men - 1966	2638	70.74	0.20	10.47	0.14	14.81	45.2	115.9	70.7
	Men - 1977	287	70.77	0.65	10.98	0.46	15.52	46.5	106.0	59.5
2	Stature									
	Men - 1966	2639	174.69	0.13	6.45	0.09	3.69	152.8	196.7	43.9
	Men - 1977	287	174.07	0.40	6.82	0.28	3.92	153.0	197.4	44.4
3	Crotch Height									
	Men - 1966	2639	84.41	0.09	4.57	0.06	5.41	65.8	100.7	34.9
	Men - 1977				measurement not taken					.483
4	Sitting Height									
	Men - 1966	2639	91.22	0.07	3.44	0.05	3.77	79.2	103.2	24.0
	Men - 1977	287	89.34	0.21	3.63	0.15	4.07	78.1	100.2	22.1
5	Chest Circumference									
	Men - 1966	2639	92.79	0.13	6.46	0.09	6.97	71.8	122.7	50.9
	Men - 1977	287	92.90	0.39	6.60	0.28	7.11	78.7	111.2	32.5
6	Waist Circumference									
	Men - 1966	2639	79.59	0.16	8.08	0.11	10.15	58.8	117.2	58.4
	Men - 1977	287	78.87	0.49	8.29	0.35	10.52	63.4	108.2	44.8
7	Hip (Buttock) Circumference									
	Men - 1966	2639	93.45	0.12	6.37	0.09	6.81	77.2	125.2	48.0
	Men - 1977	287	95.14	0.36	6.04	0.25	6.35	83.8	113.8	30.0
	Age (years)									
	Men - 1966	2639	20.18	0.03	1.48	0.02	7.35	17.0	31.0	14.0
	Men - 1977	287	19.66	0.14	2.29	0.10	11.65	16.0	30.0	14.0

TABLE 31b. PERCENTILE VALUES FOR U. S. ARMY MEN (BASIC TRAINEES) - 1966 and 1977

No.	Measurements	Percentiles in Centimeters										Range 99th (1st-99th)
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th	
1	Weight (kilograms)											
	Men - 1966	50.8	53.0	56.1	58.7	63.3	69.4	77.0	85.1	90.3	96.2	49.2
	Men - 1977			55.5	59.0	62.6	68.6	79.3	87.4	90.8		
2	Stature											
	Men - 1966	159.7	161.6	164.2	166.5	170.3	174.6	179.0	183.0	185.5	188.4	30.5
	Men - 1977			162.8	165.6	169.8	174.1	178.4	182.6	185.3		
3	Crotch Height											
	Men - 1966	73.7	75.0	77.0	78.7	81.4	84.4	87.4	90.3	92.0	94.0	21.7
	Men - 1977					measurement not taken						
4	Sitting Height											
	Men - 1966	82.8	83.9	85.5	86.8	88.9	91.2	93.5	95.6	96.9	98.4	16.6
	Men - 1977			83.5	84.9	87.0	89.3	91.7	94.0	95.4		
5	Chest Circumference											
	Men - 1966	80.0	81.3	83.2	85.0	88.2	92.2	96.7	101.4	104.5	108.2	30.8
	Men - 1977			83.8	85.2	97.9	91.9	97.0	102.4	105.6		
6	Waist Circumference											
	Men - 1966	65.5	67.3	69.4	70.9	73.7	78.0	84.2	91.0	95.5	100.5	38.1
	Men - 1977			68.4	70.4	73.4	76.5	83.1	91.5	95.9		
7	Hip (Buttock) Circum.											
	Men - 1966	81.0	82.4	84.3	85.9	88.9	92.7	97.4	102.2	105.2	108.7	29.9
	Men - 1977			87.3	88.3	90.5	94.1	98.8	103.8	106.9		
	Age (years)											
	Men - 1966	17.0	17.5	18.1	18.6	19.2	20.0	20.9	22.1	23.0	24.3	8.3
	Men - 1977			17.2	17.4	18.0	19.0	20.7	23.2	24.0		

TABLE 32a. STATISTICAL VALUES FOR U. S. ARMY MEN (BASIC TRAINEES) - 1966 and 1977

No.	Measurements	N	Mean	SE(M)	Values in Inches				Stature ratio
					S.D.	SE(SD)	V(%)	Range Min. Max.	
1	Weight (pounds) Men - 1966	2638	155.97	0.45	23.09	0.32	14.81	99.5 255.5	156.0
		287	156.02	1.43	23.22	1.01	15.52	102.5 233.8	131.3
2	Stature Men - 1966	2639	68.78	0.05	2.54	0.03	3.69	60.1 77.4	17.3
		287	68.53	0.16	2.68	0.11	3.91	60.2 77.7	17.5
3	Crotch Height Men - 1966	2639	33.23	0.04	1.80	0.02	5.41	25.9 39.7	13.8
					measurement not taken				.483
4	Sitting Height Men - 1966	2639	35.91	0.03	1.35	0.02	3.77	31.2 40.6	9.4
		287	35.17	0.08	1.43	0.06	4.07	30.7 39.4	8.7
5	Chest Circumference Men - 1966	2639	36.53	0.05	2.54	0.04	6.97	28.2 48.3	20.1
		287	36.58	0.15	2.60	0.11	7.11	31.0 43.8	12.8
6	Waist Circumference Men - 1966	2639	31.33	0.06	31.8	0.04	10.15	23.1 46.2	23.1
		287	31.05	0.19	3.27	0.14	10.53	25.0 42.6	17.6
7	Hip (Buttock) Circumference Men - 1966	2639	36.79	0.05	2.51	0.03	6.81	30.4 49.3	18.9
		287	37.46	0.14	2.38	0.10	6.35	33.0 44.8	11.8
	Age (years) Men - 1966	2639	20.18	0.03	1.48	0.02	7.35	17.0 31.0	14.0
		287	19.66	0.14	2.29	0.10	11.65	16.0 30.0	14.0

TABLE 32b. PERCENTILE VALUES FOR U. S. ARMY MEN (BASIC TRAINEES) - 1966 and 1977

No.	Measurements	Percentiles in Inches										Range (1st-99th)	
		1st	2nd	5th	10th	25th	50th Median	75th	90th	95th	98th		
1	Weight (pounds)												
	Men - 1966	111.9	117.0	123.7	129.4	139.4	153.0	169.8	187.6	199.0	212.0	220.4	108.5
	Men - 1977			122.4	130.1	138.1	151.3	172.6	192.7	200.2			
2	Stature												
	Men - 1966	62.9	63.6	64.6	65.6	67.1	68.7	70.5	72.1	73.0	74.2	74.9	12.0
	Men - 1977			64.1	65.2	66.8	68.5	70.2	71.9	73.0			
3	Crotch Height												
	Men - 1966	29.0	29.5	30.3	31.0	32.0	33.2	34.4	35.6	36.2	37.0	37.5	8.5
	Men - 1977					measurement not taken							
4	Sitting Height												
	Men - 1966	32.6	33.0	33.6	34.2	35.0	35.9	36.8	37.6	38.2	38.7	39.1	6.5
	Men - 1977			32.9	33.4	34.3	35.2	36.1	37.0	37.6			
5	Chest Circumference												
	Men - 1966	31.5	32.0	32.8	33.5	34.7	36.3	38.1	39.9	41.1	42.6	43.6	12.1
	Men - 1977			33.0	33.6	34.6	36.2	38.2	40.3	41.6			
6	Waist Circumference												
	Men - 1966	25.8	26.5	27.3	27.9	29.0	30.7	33.1	35.8	37.6	39.6	40.8	15.0
	Men - 1977			26.9	27.7	28.9	30.1	32.7	36.0	37.8			
7	Hip (Buttock) Circum.												
	Men - 1966	31.9	32.4	33.2	33.8	35.0	36.5	38.3	40.2	41.4	42.8	43.7	11.8
	Men - 1977			34.4	34.8	35.6	37.0	38.9	40.9	42.1			
	Age (years)												
	Men - 1966	17.0	17.5	18.1	18.6	19.2	20.0	20.9	22.1	23.0	24.3	25.3	8.3
	Men - 1977			17.2	17.4	18.0	19.0	20.7	23.2	24.0			

c. U. S. Army Women - 1946 and 1977

A total of 8,864 U. S. Army women were measured in 1946 at the end of World War II. The number of women in this series subsequently was reduced to 8,100 as the result of reprocessing and editing the data. For comparison, 1,331 Army women were measured in 1977, 31 years later. While the 1946 women represented the World War II Army, the 1977 women were drawn from a peace-time volunteer Army. Both series of women included WAC enlisted and officer personnel, as well as U. S. Army nurses.

Statistical and percentile values for selected body measurements of the 1946 and 1977 Army women are presented in Tables 33a and 33b, respectively, in centimeters, and in Tables 34a and 34b, respectively, in inches. Comparisons of other body measurements of Army women may be made from the anthropometric data presented in the tables given in a previous section of this report.

The Army women measured in 1977 were over four years younger on the average than the women measured in 1946. The 1977 women were 0.34 kg (0.75 lb) heavier and 0.82 cm (0.32 in) taller on the average than the 1946 women. Crotch height was 3.54 cm (1.40 in) greater for the 1977 women, and sitting height was 1.42 cm (0.55 in) higher than for the 1946 women. The 1977 women were 0.70 cm (0.27 in) smaller in bust circumference, but in waist circumference they were 4.01 cm (1.58 in) larger, and in hip circumference they were 0.43 cm (0.17 in) larger on the average than the 1946 women.

Some slight changes in body size between 1946 and 1977 Army women also are indicated in the percentile values for body measurements. At the 95th percentile level, weight was 2.0 kg (4.3 lb) less for the 1977 women, while stature was 1.9 cm (0.7 in) greater than for the 1946 women. The 95th percentile value for crotch height was 4.3 cm (1.7 in) greater for the 1977 women, and sitting height was 1.9 cm (0.8 in) higher. At the 95th percentile level for body girths, bust circumference was 4.3 cm (1.6 in) smaller, waist circumference was 4.5 cm (1.8 in) larger, and hip circumference was 1.2 cm (0.4 in) smaller for the 1977 women.

In summary, the mean (or average) values for the body measurements of 1977 Army women showed very slight increases in weight, stature, and in hip circumference, but a slight decrease in bust circumference and an increase in waist circumference of four centimeters or about 1½ inches. The 95th percentile values indicated decreases in weight, bust and hip circumferences, but increases in stature and waist circumference. The changes in body size between U. S. Army women measured in 1946 and 1977 are primarily changes in body proportions, with waist circumference showing the largest increase in size.

TABLE 33b. PERCENTILE VALUES FOR U. S. ARMY WOMEN - 1946 and 1977

No.	Measurements	Percentiles in Centimeters										Range 99th (1st-99th)
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th	
1	Weight (kilograms)											
	Women - 1946	44.0	45.3	47.4	49.4	53.2	58.3	64.7	71.7	76.5	82.4	42.6
	Women - 1977	42.7	44.0	46.6	49.3	54.1	59.6	65.1	70.7	74.5	79.7	41.1
2	Stature											
	Women - 1946	148.6	150.1	152.4	154.5	158.0	162.0	166.2	169.9	172.2	174.8	28.0
	Women - 1977	148.2	150.0	152.6	154.8	158.4	162.8	167.3	171.6	174.1	176.8	30.2
3	Crotch Height											
	Women - 1946	63.2	64.5	66.2	67.7	70.1	72.8	75.5	78.0	79.6	81.4	19.5
	Women - 1977	66.8	67.9	69.5	70.9	73.3	76.1	79.3	82.2	83.9	85.7	20.0
4	Sitting Height											
	Women - 1946	76.2	77.1	78.4	79.6	81.5	83.7	85.8	87.8	88.9	90.2	14.9
	Women - 1977	76.3	77.4	79.0	80.4	82.7	85.2	87.6	89.7	90.8	92.0	16.4
5	Bust Circumference											
	Women - 1946	74.6	76.1	78.2	80.0	83.4	87.9	93.4	99.4	103.3	107.8	36.3
	Women - 1977	76.2	76.8	78.4	80.2	83.7	87.9	92.1	96.2	99.0	102.8	29.6
6	Waist Circumference											
	Women - 1946	56.2	57.2	58.8	60.1	62.6	66.0	70.4	75.4	79.0	83.4	30.3
	Women - 1977	59.0	60.0	61.7	63.4	66.3	70.0	74.6	79.8	83.5	88.5	33.4
7	Hip (Buttock) Circum.											
	Women - 1946	82.3	83.5	85.4	87.2	90.4	94.4	99.0	103.9	107.3	111.5	32.4
	Women - 1977	81.6	83.1	85.5	87.7	91.3	95.3	99.4	103.4	106.1	109.6	30.6
	Age (years)											
	Women - 1946	21.1	22.0	22.7	23.0	23.7	25.9	30.2	35.8	39.7	44.3	26.1
	Women - 1977	17.2	17.4	17.7	18.0	19.1	22.0	25.1	29.3	33.6	40.0	28.5

TABLE 34a. STATISTICAL VALUES FOR U. S. ARMY WOMEN - 1946 and 1977

No.	Measurements	N	Mean	SE(M)	S.D.	SE(SD)	V(%)	Values in Inches		Stature ratio
								Min.	Range Max.	
1	Weight (pounds)									
	Women - 1946	8107	131.47	0.22	19.85	0.16	15.10	86.0	246.0	160.0
	Women - 1977	1331	132.22	0.53	19.16	0.37	14.49	88.0	275.8	187.8
2	Stature									
	Women - 1946	8121	63.84	0.03	2.36	0.02	3.71	55.5	72.4	16.9
	Women - 1977	1331	64.16	0.07	2.57	0.05	4.01	56.1	72.4	16.3
3	Crotch Height									
	Women - 1946	8113	28.67	0.02	1.59	0.01	5.57	22.8	35.0	12.2
	Women - 1977	1331	30.07	0.05	1.72	0.03	5.72	24.6	36.2	11.6
4	Sitting Height									
	Women - 1946	8119	32.94	0.01	1.26	0.01	3.83	28.0	38.2	10.2
	Women - 1977	1331	33.49	0.04	1.41	0.03	4.21	28.8	37.9	9.1
5	Bust Circumference									
	Women - 1946	8115	35.00	0.03	3.02	0.02	8.68	26.8	50.4	23.6
	Women - 1977	1331	34.73	0.07	2.53	0.05	7.28	27.1	50.6	23.5
6	Waist Circumference									
	Women - 1946	8115	26.38	0.03	2.46	0.02	9.38	20.5	43.3	22.8
	Women - 1977	1331	27.96	0.07	2.72	0.05	9.73	22.2	46.3	24.1
7	Hip (Buttock) Circumference									
	Women - 1946	8113	37.44	0.03	2.64	0.02	7.08	29.1	49.6	20.5
	Women - 1977	1331	37.61	0.07	2.51	0.05	6.67	30.5	53.0	22.5
	Age (years)									
	Women - 1946	8118	27.30	0.06	5.57	0.04	20.40	16.0	52.0	36.0
	Women - 1977	1331	23.10	0.15	5.40	0.13	23.38	17.0	60.0	43.0

TABLE 33b. PERCENTILE VALUES FOR U. S. ARMY WOMEN - 1946 and 1977

No.	Measurements	Percentiles in Inches										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		99th
1	Weight (pounds)												
	Women - 1946	97.0	99.9	104.4	108.8	117.2	128.6	142.7	158.1	168.6	181.6	191.0	94.0
	Women - 1977	94.2	97.1	102.8	108.7	119.3	131.4	143.6	155.8	164.3	175.7	184.8	90.6
2	Stature												
	Women - 1946	58.5	59.1	60.0	60.8	62.2	63.8	65.4	66.9	67.8	68.8	69.5	11.0
	Women - 1977	58.3	59.0	60.1	60.9	62.4	64.1	65.9	67.6	68.5	69.6	70.2	11.9
3	Crotch Height												
	Women - 1946	24.9	25.4	26.1	26.7	27.6	28.6	29.7	30.7	31.3	32.0	32.6	7.7
	Women - 1977	26.3	26.7	27.4	27.9	28.8	30.0	31.2	32.4	33.0	33.8	34.2	7.9
4	Sitting Height												
	Women - 1946	30.0	30.4	30.9	31.3	32.1	32.9	33.8	34.6	35.0	35.5	35.9	5.9
	Women - 1977	30.0	30.5	31.1	31.7	32.6	33.5	34.5	35.3	35.8	36.2	36.5	6.5
5	Bust Circumference												
	Women - 1946	29.4	30.0	30.8	31.5	32.8	34.6	36.8	39.1	40.6	42.4	43.7	14.3
	Women - 1977	30.0	30.2	30.8	31.6	33.0	34.6	36.2	37.9	39.0	40.5	41.7	11.7
6	Waist Circumference												
	Women - 1946	22.1	22.5	23.1	23.7	24.6	26.0	27.7	29.7	31.1	32.8	34.1	12.0
	Women - 1977	23.2	23.6	24.3	24.9	26.1	27.6	29.4	31.4	32.9	34.8	26.4	13.2
7	Hip (Buttock) Circum.												
	Women - 1946	32.4	32.9	33.6	34.3	35.6	37.2	39.0	40.9	42.2	43.9	45.2	12.8
	Women - 1977	32.1	32.7	33.7	34.5	35.9	37.5	39.1	40.7	41.8	43.1	44.2	12.1
	Age (years)												
	Women - 1946	21.1	22.0	22.7	23.0	23.7	25.9	30.2	35.8	39.7	44.3	47.2	26.1
	Women - 1977	17.2	17.4	17.7	18.0	19.1	22.0	25.1	29.3	33.6	40.0	45.7	28.5

d. U. S. Army Men — 1966 and U. S. Army Women — 1977

The three comparisons of anthropometric data discussed previously are concerned with changes in body size in Army personnel over a period of time. However, the increase not only in numbers of women but also in the importance of women in the U. S. Army has emphasized the significance of body size information on both Army men and women. Anthropometric data on Army men and women are required for application and utilization in the design and sizing of clothing and in the human engineering of equipment and materiel which may be used or operated by both men and women in the Army.

A small series of Army men was measured at the conclusion of the recent anthropometric survey of U. S. Army women, thus providing directly comparable data on the body measurements of both men and women. However, since this small sample of Army men represented only basic trainees, a larger and more representative series of Army men would provide a more suitable comparison of body size. Consequently data on Army men measured in 1966 have been used here for comparison with the Army women measured in 1977.

Statistical and percentile values for selected body measurements of 1966 Army men and 1977 Army women are presented in Tables 35a and 35b, respectively, in centimeters, and in Tables 36a and 36b, respectively, in inches. Comparisons of any other body measurements of Army men and women may be made from the anthropometric data presented in the tables given in a previous section of this report.

The Army women measured in 1977 were about one year older on the average than the 1966 Army men. On the average, the 1966 Army men were 12.26 kg (26.88 lb) heavier and 11.56 cm (4.55 in) taller than the 1977 Army women. Crotch height was 7.57 cm (2.98 in) higher for men, and sitting height was 5.61 cm (2.21 in) greater for men on the average than for women. On the average, chest circumference for men was 5.56 cm (2.19 in) larger than bust circumference for women, while waist circumference was 9.28 cm (3.65 in) larger for men than for women. However, in hip circumference the women were 1.31 cm (0.52 in) larger than men on the average. The differences in proportions between men and women also are shown in the stature ratios. The relatively smaller waists and larger hips in women in proportion to stature are indicated by the stature ratios of 46 percent for men and 44 percent for women in waist circumference, but 54 percent for men and 59 percent for women in hip circumference.

The contrasts in body size between Army men and women were even more marked in the percentile values for the body measurements. At the 95th percentile level, representing large men and women, men were 17.1 kg (37.6 lb) heavier, and 11.5 cm (4.6 in) taller than women. Crotch height was 7.8 cm (3.1 in) greater for men, and

sitting height was 5.9 cm (2.3 in) higher for men than for women at the 95th percentile level. Again at the 95th percentile level, chest circumference for men was 6.9 cm (2.7 in) larger than bust circumference for women, while waist circumference for men was 12.4 cm (4.9 in) larger than for women. Hip circumference for women was 0.6 cm (0.2 in) larger than for men at the 95th percentile level.

At the 5th percentile level of body measurements for small men and women, the contrasts in body size between men and women also were consistent, but were slightly less than at the 95th percentile level. Weight for men was 10.8 kg (23.5 lb) heavier, and stature was 11.2 cm (4.4 in) taller for men than for women at the 5th percentile level. Crotch height was 6.8 cm (2.6 in) greater and sitting height was 5.5 cm (2.2 in) higher for men than for women at the 5th percentile level. The 5th percentile value for chest circumference for men was 5.7 cm (2.3 in) larger than bust circumference for women, while waist circumference was 8.0 cm (3.1 in) larger for men than for women. Hip circumference at the 5th percentile was 0.4 cm (0.2 in) larger for women than for men.

The anthropometric data on U. S. Army men and women presented here indicate that men are larger than women in all body measurements except for hip circumference in which women exceed men. The differences in body size between men and women also are consistent in the percentile values for body measurements, from the 5th percentile values up to the 95th percentile values.

The differences in body proportions between men and women, particularly in the relatively smaller waist circumference and the larger hip circumference in women, emphasize the importance of anthropometric data in the design and sizing of clothing which may be intended for use by both Army men and women. As a practical example of this type of problem, the issue of men's fatigue trousers to women has been considered. While some women of course can wear men's trousers with a satisfactory fit, many women would require larger sizes of men's trousers to fit their relatively larger hips. The waists of these men's trousers would then be too large for the women's relatively smaller waists and extensive alterations in the waists of the trousers would be required.

The differences in body size between men and women also are critical in the design and human engineering of equipment and materiel intended for use and operation by both men and women in the Army. Differences between men and women in sitting height and eye height, in hip and shoulder breadth, and in arm and leg functional reaches, for example, present human engineering problems in the design and sizing of vehicles, aircraft, and other such equipment.

TABLE 35a. STATISTICAL VALUES FOR U. S. ARMY MEN - 1966 and WOMEN - 1977

No.	Measurements	Values in Centimeters							Stature ratio
		N	Mean	SE(M)	S.D.	SE(SD)	V(%)	Range Min. Max.	
1	Weight (kilograms) Men - 1966 Women - 1977	6677	72.23	0.13	10.60	0.09	14.68	45.2 128.7	83.5
		1331	59.97	0.24	8.69	0.17	14.49	39.9 125.1	85.2
2	Stature Men - 1966 Women - 1977	6682	174.52	0.08	6.61	0.06	3.79	151.8 199.7	47.9
		1331	162.96	0.18	6.52	0.13	4.00	142.6 183.8	41.2
3	Crotch Height Men - 1966 Women - 1977	6682	83.94	0.06	4.67	0.04	5.57	64.8 101.7	36.9
		1331	76.37	0.12	4.38	0.08	5.73	62.4 92.0	29.6
4	Sitting Height Men - 1966 Women - 1977	6682	90.69	0.04	3.66	0.03	4.04	77.2 103.2	26.0
		1331	85.08	0.10	3.59	0.07	4.22	73.1 96.2	23.1
5	Chest/Bust Circumference Men - 1966 Women - 1977	6682	93.77	0.08	6.69	0.06	7.13	71.8 124.2	52.4
		1331	88.21	0.18	6.43	0.12	7.28	68.9 128.4	59.5
6	Waist Circumference Men - 1966 Women - 1977	6682	80.29	0.10	8.18	0.07	10.19	58.8 127.7	68.9
		1331	71.01	0.19	6.90	0.13	9.71	56.5 117.5	61.0
7	Hip (Buttock) Circumference Men - 1966 Women - 1977	6682	94.21	0.08	6.25	0.05	6.63	77.2 134.2	57.0
		1331	95.52	0.18	6.39	0.12	6.69	77.4 134.6	57.2
	Age (years) Men - 1966 Women - 1977	6682	22.17	0.06	4.64	0.04	20.92	17.0 55.0	38.0
		1331	23.10	0.15	5.40	0.13	23.38	17.0 60.0	43.0

TABLE 35b. PERCENTILE VALUES FOR U. S. ARMY MEN - 1966 and WOMEN - 1977

No.	Measurements	Percentiles in Centimeters										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		99th
1	Weight (kilograms)												
	Men - 1966	52.6	54.5	57.4	60.0	64.8	71.0	78.4	86.3	91.6	98.3	103.0	50.4
	Women - 1977	42.7	44.0	46.6	49.3	54.1	59.6	65.1	70.7	74.5	79.7	83.8	41.1
2	Stature												
	Men - 1966	158.9	160.9	163.8	166.2	170.1	174.4	178.9	183.0	185.6	188.4	190.3	31.4
	Women - 1977	148.2	150.0	152.6	154.8	158.4	162.8	167.3	171.6	174.1	176.8	178.4	30.2
3	Crotch Height												
	Men - 1966	72.8	74.2	76.3	78.0	80.8	83.9	87.0	89.9	91.7	93.7	95.1	22.3
	Women - 1977	66.8	67.9	69.5	70.9	73.3	76.1	79.3	82.2	83.9	85.7	86.8	20.0
4	Sitting Height												
	Men - 1966	82.0	83.0	84.5	85.9	88.2	90.8	93.2	95.4	96.7	98.2	99.2	17.2
	Women - 1977	76.3	77.4	79.0	80.4	82.7	85.2	87.6	89.7	90.8	92.0	92.7	16.4
5	Chest/Bust Circum.												
	Men - 1966	80.9	82.2	84.1	85.9	89.1	93.0	97.7	102.6	105.9	109.9	112.8	31.9
	Women - 1977	76.2	76.8	78.4	80.2	83.7	87.9	92.1	96.2	99.0	102.8	105.8	29.6
6	Waist Circumference												
	Men - 1966	66.3	67.7	69.7	71.3	74.5	78.9	84.7	91.4	95.9	101.6	105.6	39.3
	Women - 1977	59.0	60.0	61.7	63.4	66.3	70.0	74.6	79.8	83.5	88.5	92.4	33.4
7	Hip (Buttock) Circum.												
	Men - 1966	82.0	83.3	85.1	86.8	89.8	93.6	97.9	102.5	105.5	109.3	112.0	30.0
	Women - 1977	81.6	83.1	85.5	87.7	91.3	95.3	99.4	103.4	106.1	109.6	112.2	30.6
	Age (years)												
	Men - 1966	17.4	17.7	18.6	19.1	19.6	20.6	23.0	27.4	31.5	37.7	43.0	25.6
	Women - 1977	17.2	17.4	17.7	18.0	19.1	22.0	25.1	29.3	33.6	40.0	45.7	28.5

TABLE 36a. STATISTICAL VALUES FOR U. S. ARMY MEN - 1966 and WOMEN - 1977

No.	Measurements	N	Mean	SE(M)	S.D.	SE(SD)	V(%)	Values in Inches		Stature ratio
								Min.	Max.	
1	Weight (pounds) Men - 1966 Women - 1977	6677	159.10	0.29	23.35	0.20	14.68	99.5	283.5	184.0
		1331	132.22	0.53	19.16	0.37	14.49	88.0	275.8	187.8
2	Stature Men - 1966 Women - 1977	6682	68.71	0.03	2.60	0.02	3.79	59.7	78.6	18.9
		1331	64.16	0.07	2.57	0.05	4.01	56.1	72.4	16.3
3	Crotch Height Men - 1966 Women - 1977	6682	33.05	0.02	1.84	0.02	5.57	25.5	40.0	14.5
		1331	30.07	0.05	1.72	0.03	5.72	24.6	36.2	11.6
4	Sitting Height Men - 1966 Women - 1977	6682	35.70	0.02	1.44	0.01	4.04	30.4	40.6	10.2
		1331	33.49	0.04	1.41	0.03	4.21	28.8	37.9	9.1
5	Chest/Bust Circumference Men - 1966 Women - 1977	6682	36.92	0.03	2.63	0.02	7.13	28.2	48.9	20.7
		1331	34.73	0.07	2.53	0.05	7.28	27.1	50.6	23.5
6	Waist Circumference Men - 1966 Women - 1977	6682	31.61	0.04	3.22	0.03	10.19	23.1	50.3	27.2
		1331	27.96	0.07	2.72	0.05	9.73	22.2	46.3	24.1
7	Hip (Buttock) Circumference Men - 1966 Women - 1977	6682	37.09	0.03	2.46	0.02	6.63	30.4	52.8	22.4
		1331	37.61	0.07	2.51	0.05	6.67	30.5	53.0	22.5
	Age (years) Men - 1966 Women - 1977	6682	22.17	0.06	4.64	0.04	20.92	17.0	55.0	38.0
		1331	23.10	0.15	5.40	0.13	23.38	17.0	60.0	43.0

TABLE 36b. PERCENTILE VALUES FOR U. S. ARMY MEN - 1966 and WOMEN - 1977

No.	Measurements	Percentiles in Inches										Range (1st-99th)	
		1st	2nd	5th	10th	25th	Median 50th	75th	90th	95th	98th		99th
1	Weight (pounds)												
	Men - 1966	116.0	120.1	126.1	132.1	142.6	156.3	172.6	190.1	201.9	216.5	226.9	110.9
	Women - 1977	94.2	97.1	102.8	108.7	119.3	131.4	143.6	155.8	164.3	175.7	184.8	90.6
2	Stature												
	Men - 1966	62.6	63.4	64.5	65.4	67.0	68.7	70.4	72.1	73.1	74.2	74.9	12.3
	Women - 1977	58.3	59.0	60.1	60.9	62.4	64.1	65.9	67.6	68.5	69.6	70.2	11.9
3	Crotch Height												
	Men - 1966	28.6	29.2	30.0	30.7	31.8	33.0	34.3	35.4	36.1	36.9	37.4	8.8
	Women - 1977	26.3	26.7	27.4	27.9	28.8	30.0	31.2	32.4	33.0	33.8	34.2	7.9
4	Sitting Height												
	Men - 1966	32.3	32.7	33.3	33.8	34.7	35.7	36.7	37.6	38.1	38.6	39.0	6.7
	Women - 1977	30.0	30.5	31.1	31.7	32.6	33.5	34.5	35.3	35.8	36.2	36.5	6.5
5	Chest/Bust Circum.												
	Men - 1966	31.8	32.4	33.1	33.8	35.1	36.6	38.5	40.4	41.7	43.3	44.4	12.6
	Women - 1977	30.0	30.2	30.8	31.6	33.0	34.6	36.2	37.9	39.0	40.5	41.7	11.7
6	Waist Circumference												
	Men - 1966	26.1	26.7	27.4	28.1	29.3	31.0	33.4	36.0	37.8	40.0	41.6	15.5
	Women - 1977	23.2	23.6	24.3	24.9	26.1	27.6	29.4	31.4	32.9	34.8	36.4	13.2
7	Hip (Buttock) Circum.												
	Men - 1966	32.3	32.8	33.5	34.2	35.4	36.8	38.6	40.4	41.6	43.0	44.1	11.8
	Women - 1977	32.1	32.7	33.7	34.5	35.9	37.5	39.1	40.7	41.8	43.1	44.2	12.1
	Age (years)												
	Men - 1966	17.4	17.7	18.6	19.1	19.6	20.6	23.0	27.4	31.5	37.7	43.0	25.6
	Women - 1977	17.2	17.4	17.7	18.0	19.1	22.0	25.1	29.3	33.6	40.0	45.7	28.5

8. SUMMARY AND CONCLUSIONS

Anthropometric data obtained during the measurement of six samples of U. S. Army men and women are presented and discussed in this report. Data for Army men and women measured in 1946, for Army men and male basic trainees measured in 1966, and for Army women and male basic trainees measured in 1977 are included here. The anthropometric data thus provide information on the body size of Army personnel during the period between 1946 and 1977.

Anthropometric data for these six samples are presented in summary tables, in both centimeters and inches. Data for a total of 118 body measurements have been extracted from the summary tables and collated. Through the use of this format, all of the available anthropometric data for any one body measurement may be examined readily on the two facing pages of statistical and percentile values, either in centimeters or in inches.

Data for 14 workspace measurements of both Army men and women also are included in this report.

Finally, comparisons of body size between Army men of 1946 and 1966, Army male basic trainees of 1966 and 1977, Army women of 1946 and 1977, and between Army men of 1966 and Army women of 1977 are presented and discussed.

This summary of over 30 years of U. S. Army anthropometry indicates that there have not been any marked increases in the body size of U. S. Army personnel. The anthropometric data on Army men and women, presented together here and discussed in detail for the first time, do indicate however that the differences in body size and proportions between Army men and women deserve serious attention in the design and sizing of any Army clothing and equipment intended for use by both men and women.

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10. APPENDIX

The Terminology of Body Measurements

The terminology of body measurements is a problem area in that it involves conflicts between common or popular terms and scientific or anatomical terms for landmarks on or parts of the human body. The terms for some body measurements have been derived from tailoring or clothing pattern design. While clarity and consistency are to be desired, much of the anthropometric terminology in use today is the result of compromises between traditional and current usage.

The terminology utilized in this report represents an attempt to achieve some degree of standardization and conformity in current usage. As a result, the terms for some body measurements have been changed from those used in earlier publications of Army anthropometry. In order to indicate these changes and to facilitate reference to anthropometric terminology, lists of terms for body measurements are presented here. For each of the Army series discussed in this report, the term for a body measurement is given as it was originally published, together with the equivalent term as utilized in this report.

a. **Measurements of U. S. Army Men - 1946**

Body measurements taken on U. S. Army men in 1946 are defined and illustrated in: Randall, F. E., and M. J. Baer, Survey of body size of Army personnel, male and female; Project No. E-59-46, Phase I, Report No. 1 - Methodology, Report No. 122, U. S. Army Quartermaster Climatic Research Laboratory, Lawrence, Mass., 1947. Revised edition by R. W. Newman and R. M. White published in 1951. (AD 149 458)

Original term

Term used in this report

Weight

Weight

STANDING MEASUREMENTS

Stature

Stature

Cervicale Height

Cervicale Height

Outseam

Waist (Iliocristale) Height

Inseam

Crotch Height

Thigh Length^a

Thigh Length

Lower Leg Length

Tibiale Height

Arm Length

Shoulder-Fingertip Length

SITTING MEASUREMENTS

Sitting Height

Sitting Height

Trunk Height

Trunk Height, Sitting

Upper Arm Length

Acromiale-Radiale Length

Shoulder-Elbow

Shoulder-Elbow Length

Forearm-Hand Length

Elbow-Fingertip Length

Patella Height

Knee Height, Sitting

Buttock-Knee

Buttock-Knee Length

DEPTH AND BREADTH MEASUREMENTS

Chest Depth

Chest Depth

Trunk Depth^b

Trunk Depth

Bideltoid

Shoulder (Bideltoid) Breadth

Chest Breadth

Chest Breadth

Bi-iliac

Bi-iliac Breadth

Elbow Breadth

Elbow-Elbow Breadth

Hip Breadth

Hip Breadth, Sitting

^a"Obtained by subtracting Lower Leg Length from Inseam."

^b"Subject stands. Measurement taken as the maximum anterior-posterior diameter of either the thorax or abdomen, whichever is greater, in the horizontal plane. Contact, no pressure."

Measurements of U. S. Army Men — 1946 (continued)

Original term

Term used in this report

CIRCUMFERENCES

Neck Circumference
Shoulder Circumference
Chest Circumference
Waist Circumference
Hip Circumference
Vertical Trunk Circumference

Neck Circumference
Shoulder Circumference
Chest Circumference
Waist Circumference
Hip (Buttock) Circumference
Vertical Trunk Circumference,
Sitting

LIMB CIRCUMFERENCES

Arm Scye
Axillary Arm Circumference
Middle Upper Arm Circumference
Lower Upper Arm Circumference
Upper Forearm Circumference
Middle Forearm Circumference
Wrist Circumference
Crotch Thigh Circumference
Middle Thigh Circumference
Lower Thigh Circumference
Upper Leg Circumference
Calf Circumference
Ankle Circumference

Scye Circumference
Axillary Arm Circumference
Biceps Circumference, Relaxed
Lower Upper Arm Circumference
Forearm Circumference, Relaxed
Mid-Forearm Circumference
Waist Circumference
Upper Thigh Circumference
Mid-Thigh Circumference
Lower Thigh Circumference
Upper Leg Circumference
Calf Circumference
Ankle Circumference

SURFACE MEASUREMENTS

Shoulder Length
Cross Back Width
Sleeve Length
Total Crotch Length

Shoulder Length
Interscye, Back
Sleeve Length
Crotch Length

HEAD AND FACE MEASUREMENTS

Head Circumference
Head Length
Otopasion Superior—Outer Canthus
Head Breadth
Head Height (Porion-Apex)
Face Length (Nasion-Menton)
Minimum Frontal
Bizygomatic
Bigonial

Head Circumference
Head Length
Ectocanthus-Otopasion Superior
Head Breadth
Head Height (Tragion-top of head)
Face Length (Menton-Sellion)
Minimum Frontal Breadth
Face Breadth (Bizygomatic)
Bigonial Breadth

Measurements of U. S. Army Men -- 1946 (continued)

Original term

Term used in this report

HEAD AND FACE MEASUREMENTS (continued)

Biocular	Biocular Breadth
Interocular	Interocular Breadth
Nose Length (Nasion-Subnasale)	Nose Length (Subnasale-Sellion)
Nasal Root Breadth	Nasal Root Breadth
Nose Breadth	Nose Breadth

HAND MEASUREMENTS

Hand Length	Hand Length
Hand Breadth	Hand Breadth

FOOT MEASUREMENTS

Foot Length	Foot Length
Instep Length	Instep Length
Foot Breadth	Foot Breadth
Heel Breadth	Heel Breadth
Ball Foot Circumference	Ball of Foot Circumference

b. Measurements of U. S. Army Men — 1966

The same body measurements were taken on U. S. Army men — 1966 and on U. S. Army Men (Basic Trainees) — 1966. These measurements are defined and illustrated in: White, R. M., and E. Churchill, The body size of soldiers: U. S. Army anthropometry — 1966, Technical Report 72-51-CE, U. S. Army Natick Laboratories, Natick, Mass., 1971. (AD 743 465)

Original term

Term used in this report

Weight

Weight

STANDING MEASUREMENTS

Stature

Stature

Cervicale Height

Cervicale Height

Shoulder Height (Acromiale Height)

Shoulder (Acromiale) Height

Waist Height (Iliocristale Height)

Waist (Iliocristale) Height

Crotch Height

Crotch Height

Kneecap Height (Patella Height)

Kneecap (Patella) Height

Calf Height

Calf Height

Functional Reach

Functional (Thumb-tip) Reach

SITTING MEASUREMENTS

Vertical Arm Reach, Sitting

Vertical Reach, Sitting

Sitting Height

Sitting Height

Eye Height, Sitting

Eye Height, Sitting

Mid-Shoulder Height, Sitting

Mid-Shoulder Height, Sitting

Shoulder-Elbow Length

Shoulder-Elbow Length

Elbow-Fingertip Length

Elbow-Fingertip Length

(Forearm-Hand Length)

Knee Height, Sitting

Knee Height, Sitting

Popliteal Height, Sitting

Popliteal Height, Sitting

Buttock-Knee Length

Buttock-Knee Length

Buttock-Popliteal Length

Buttock-Popliteal Length

DEPTH AND BREADTH MEASUREMENTS

Chest Depth

Chest Depth

Chest Breadth

Chest Breadth

Hip Breadth, Standing

Hip Breadth, Standing

Shoulder Breadth (Bideltoid Breadth)

Shoulder (Bideltoid) Breadth

Forearm-Forearm Breadth

Forearm-Forearm Breadth

(Elbow-to-Elbow Breadth)

Hip Breadth, Sitting

Hip Breadth, Sitting

Measurements of U. S. Army Men — 1966 (continued)

Original term

Term used in this report

CIRCUMFERENCES

Neck Circumference
Shoulder Circumference
Chest Circumference
Waist Circumference
Hip Circumference
Vertical Trunk Circumference,
Standing

Neck Circumference
Shoulder Circumference
Chest Circumference
Waist Circumference
Hip (Buttock) Circumference
Vertical Trunk Circumference,
Standing

LIMB CIRCUMFERENCES

Arm Scye Circumference
Biceps Circumference, Relaxed
Biceps Circumference, Flexed
Forearm Circumference, Flexed
Wrist Circumference
Upper Thigh Circumference
Lower Thigh Circumference
Calf Circumference
Ankle Circumference

Scye Circumference
Biceps Circumference, Relaxed
Biceps Circumference, Flexed
Forearm Circumference, Flexed
Wrist Circumference
Upper Thigh Circumference
Lower Thigh Circumference
Calf Circumference
Ankle Circumference

SURFACE MEASUREMENTS

Shoulder Length
Interscye Breadth
Interscye, Maximum
Waist Back Length
Sleeve Inseam Length
Sleeve Length

Shoulder Length
Interscye, Back
Interscye, Maximum
Waist Back Length
Sleeve Inseam Length
Sleeve Length

HEAD AND FACE MEASUREMENTS*

Head Circumference
Head Length
Occiput-Nasal Root
Occiput-Pronasale
Occiput-External Canthus
Occiput-Tragion
Head Breadth
Bitragion Breadth
Head Height (Tragion-Vertex Height)
Face Length (Menton-Nasal Root Length)
Face Breadth (Bizygomatic Breadth)
Interpupillary Breadth

Head Circumference
Head Length
Sellion to back of head
Pronasale to back of head
Ectocanthus to back of head
Tragion to back of head
Head Breadth
Bitragion Breadth
Head Height (Tragion-top of head)
Face Length (Menton-Sellion)
Face Breadth (Bizygomatic)
Interpupillary Breadth

Measurements of U. S. Army Men — 1966 (continued)

Original term

Term used in this report

HAND MEASUREMENTS

Hand Length
Palm Length
Hand Breadth
Hand Circumference
Thumb Crotch Length

Hand Length
Palm Length
Hand Breadth
Hand Circumference
Thumb Crotch Length

FOOT MEASUREMENTS

Foot Length
Instep Length
Ball of Foot Breadth
Heel Breadth
Ball of Foot Circumference
Instep Circumference
Heel-Ankle Circumference

Foot Length
Instep Length
Foot Breadth
Heel Breadth
Ball of Foot Circumference
Instep Circumference
Heel-Ankle Circumference

* Note on head measurements: A headboard was not used to obtain head measurements of U. S. Army men in 1966; horizontal head measurements were made with an anthropometer. Thus, the horizontal measurement made from the back of the head (occiput) to the tip of the nose (pronasale) originally was called "Occiput-Pronasale." The terms for this group of head measurements have been changed, and the more accurate descriptive terms are used in this report for consistency.

c. Measurements of U. S. Army Men (Basic Trainees) - 1977

Body measurements taken on male U. S. Army basic trainees in 1977 are defined in: McConville, J. T., E. Churchill, T. Churchill and R. M. White, Anthropometry of women of the U. S. Army - 1977; Report No. 5 - Comparative data for U. S. Army Men, Technical Report NATICK/TR-77/029, U. S. Army Natick Research and Development Command, Natick, Mass., 1977. (AD A048 591)

Original term

Term used in this report

Weight

Weight

STANDING MEASUREMENTS

Stature
Axilla Height
Suprasternale Height
Chest Height
Substernale Height
Elbow (Radiale) Height
Knuckle Height
Waist Height
Waist Height (Omphalion)
Buttock Height
Gluteal Furrow Height
Tibiale Height
Acromion-Radiale Length
Radiale-Stylian Length

Stature
Axilla Height
Suprasternale Height
Chest (Nipple) Height
Substernale Height
Elbow (Radiale) Height
Knuckle Height (Metacarpale III)
Waist Height (Natural)
Waist Height (Omphalion)
Buttock Height
Gluteal Furrow Height
Tibiale Height
Acromion-Radiale Length
Radiale-Stylian Length

SITTING MEASUREMENTS

Sitting Height
Eye Height, Sitting
Mid-Shoulder Height, Sitting
Shoulder-Elbow Length
Elbow-Grip Length
Elbow-Fingertip Length
Knee Height, Sitting
Popliteal Height
Buttock-Knee Length

Sitting Height
Eye Height, Sitting
Mid-Shoulder Height, Sitting
Shoulder-Elbow Length
Elbow-Grip Length
Elbow-Fingertip Length
Knee Height, Sitting
Popliteal Height, Sitting
Buttock-Knee Length

Measurements of U. S. Army Men (Basic Trainees) — 1977 (continued)

Original term

Term used in this report

DEPTH AND BREADTH MEASUREMENTS

Chest Depth
Waist Depth
Biacromial Breadth

Chest Depth
Waist Depth
Biacromial Breadth

CIRCUMFERENCES

Shoulder Circumference
Chest Circumference
Waist Circumference
Waist Circumference (Omphalion)
Hip Circumference

Shoulder Circumference
Chest Circumference
Waist Circumference (Natural)
Waist Circumference (Omphalion)
Hip (Buttock) Circumference

LIMB CIRCUMFERENCES

Biceps Circumference, Relaxed
Biceps Circumference, Flexed
Calf Circumference
Ankle Circumference

Biceps Circumference, Relaxed
Biceps Circumference, Flexed
Calf Circumference
Ankle Circumference

SURFACE MEASUREMENTS

Interscye, Back
Interscye, Front
Back Curvature — Chest
Back Curvature — Waist
Back Curvature — Hip
Waist Back Length
Waist Front Length
Sleeve Inseam Length
Sleeve Outseam Length

Interscye, Back
Interscye, Front
Back Curvature — Chest Level
Back Curvature — Waist Level
Back Curvature — Hip Level
Waist Back Length
Waist Front Length
Sleeve Inseam Length
Sleeve Outseam Length

HEAD AND FACE MEASUREMENTS*

Head Circumference
Sagittal Arc
Bitracion-Coronal Arc
Bitracion-Frontal Arc
Bitracion-Menton Arc
Bitracion-Submandibular Arc

Head Circumference
Sagittal Arc
Bitracion-Coronal Arc
Bitracion-Frontal Arc
Bitracion-Menton Arc
Bitracion-Submandibular Arc

Measurements of U. S. Army Men (Basic Trainees) — 1977 (continued)

Original term

Term used in this report

HEAD AND FACE MEASUREMENTS (continued)

Head Length	Head Length
Glabella to wall	Glabella to back of head
Sellion to wall	Sellion to back of head
Pronasale to wall	Pronasale to back of head
Subnasale to wall	Subnasale to back of head
Lip Protrusion to wall	Lip Protrusion to back of head
Menton to wall	Menton to back of head
Ectocanthus to wall	Ectocanthus to back of head
Tragion to wall	Tragion to back of head
Head Breadth	Head Breadth
Bitragion Breadth	Bitragion Breadth
Biauricular Breadth	Biauricular Breadth
Head Height (Tragion-vertex)	Head Height (Tragion-top of head)
Ectocanthus to vertex	Ectocanthus to top of head
Glabella to vertex	Glabella to top of head
Sellion to vertex	Sellion to top of head
Pronasale to vertex	Pronasale to top of head
Subnasale to vertex	Subnasale to top of head
Stomion to vertex	Stomion to top of head
Menton to vertex	Menton to top of head
Face Length (Sellion-Menton)	Face Length (Menton-Sellion)
Crinion-Menton	Menton-Crinion
Minimum Frontal Breadth	Minimum Frontal Breadth
Face Breadth (Bizygomatic)	Face Breadth (Bizygomatic)
Biocular Breadth	Biocular Breadth
Interpupillary Distance	Interpupillary Breadth
Nose Length (Sellion-Subnasale)	Nose Length (Subnasale-Sellion)
Nose Breadth	Nose Breadth
Mouth Breadth, Smiling	Mouth Breadth, Smiling
Ear Length	Ear Length
Ear Breadth	Ear Breadth

HAND MEASUREMENTS

Hand Length	Hand Length
Palm Length	Palm Length
Hand Breadth	Hand Breadth
Hand Circumference	Hand Circumference

Measurements of U. S. Army Men (Basic Trainees) -- 1977 (continued)

Original term

Term used in this report

FOOT MEASUREMENTS

Foot Length

Foot Length

Instep Length

Instep Length

Foot Breadth

Foot Breadth

Foot Circumference

Ball of Foot Circumference

Heel-Ankle Circumference

Heel-Ankle Circumference

Sphyrion Height

Sphyrion Height

*Note on head measurements: A headboard was used to obtain horizontal and vertical head measurements on U. S. Army men in 1977. Horizontal head measurements were made from the landmark back to the vertical surface of the headboard which was tangent to the back of the head. Therefore, these measurements originally were designated as "...to wall", as in "Pronasale to wall." Vertical head measurements were made from the landmark up to the horizontal surface of the headboard which was tangent to the top of the head or vertex. Therefore, these measurements originally were designated as "...to vertex", as in "Pronasale to vertex." However, the terms "(landmark) to back of head" and "(landmark) to top of head" are more accurate descriptive terms for these two groups of head measurements, and thus are used in this report.

d. Measurements of U. S. Army Women - 1946

Body measurements taken on U. S. Army women in 1946 are defined in: Randall, F. E., Survey of body size of Army personnel, male and female; Project E-59-46, Phase 4, Report No. 1 - Methodology and general considerations (female), Report No. 123, U. S. Army Quartermaster Climatic Research Laboratory, Lawrence, Mass., 1947. (AD 209 809)

Original term	Term used in this report
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Weight	Weight
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STANDING MEASUREMENTS

Stature	Stature
Cervicale Height	Cervicale Height
Acromion Height	Shoulder (Acromiale) Height
Waist Height	Waist Height
Inseam	Crotch Height
Hip Height	Hip (Trochanteric) Height
Arm Length ^a	Shoulder-Fingertip Length

SITTING MEASUREMENTS

Sitting Height	Sitting Height
Trunk Height	Trunk Height, Sitting
Shoulder-Elbow	Shoulder-Elbow Length
Forearm-Hand Length	Elbow-Fingertip Length
Patella Height	Knee Height, Sitting
Buttock-Knee	Buttock-Knee Length

DEPTH AND BREADTH MEASUREMENTS

Chest Depth	Chest Depth (above Bust)
Trunk Depth ^b	Trunk Depth
Chest Breadth	Chest Breadth
Bi-iliac	Bi-iliac Breadth
Bideltoid	Shoulder (Bideltoid) Breadth
Nipple-Nipple	Bustpoint-Bustpoint Breadth
Elbow Breadth	Elbow-Elbow Breadth
Hip Breadth	Hip Breadth, Sitting

^a"Subject stands. Measurement taken vertically from floor to left dactylion (fingertip). To get Arm Length, this measurement must be subtracted from Acromion Height."

^b"Subject stood. Anthropometer held horizontally at the subject's left. Measurement taken as the maximum anterior-posterior diameter of the thorax or abdomen, whichever is greater, below the breasts."

Measurements of U. S. Army Women — 1946 (continued)

Original term

Term used in this report

CIRCUMFERENCES

Neck Circumference
Breast Circumference
Chest Circumference
Waist Circumference
Halfway to Hip Circumference
Hip Circumference
Vertical Trunk Circumference

Neck Circumference
Bust Circumference
Chest Circumference below Bust
Waist Circumference
Halfway to Hip Circumference
Hip Circumference at Trochanterion
Vertical Trunk Circumference,
Standing

LIMB CIRCUMFERENCES

Arm Scye
Upper Arm Circumference
Forearm Circumference
Wrist Circumference
Thigh Circumference at Crotch
Mid-Thigh Circumference

Scye Circumference
Biceps Circumference, Relaxed
Forearm Circumference, Relaxed
Wrist Circumference
Upper Thigh Circumference
Mid-Thigh Circumference

SURFACE MEASUREMENTS

Shoulder Length
Cervicale-Lateral Neck Point
Cross Back Width
Back Waist Length
Front Waist Length
Nipple to Nipple over Cervicale
Lateral Neck Point Waist
Arm Pit Waist
Total Crotch Length

Shoulder Length
Cervicale to Lateral Neck Point
Interscye, Back
Waist Back Length
Waist Front Length
Strap Length
Lateral Neck Point to Waist
Axilla to Waist Length
Crotch Length

HEAD AND FACE MEASUREMENTS

Head Circumference
Head Length
Outer Canthus-Otobasion Superior
Head Breadth
Head Height (Apex-Tragus)
Face Length (Nasion-Gnathion)
Minimum Frontal
Bizygomatic

Head Circumference
Head Length
Ectocanthus-Otobasion Superior
Head Breadth
Head Height (Tragion-top of head)
Face Length (Menton-Sellion)
Minimum Frontal Breadth
Face Breadth (Bizygomatic)

Measurements of U. S. Army Women — 1946 (continued)

Original term

Term used in this report

HEAD AND FACE MEASUREMENTS (continued)

Biocular
Interocular
Nose Length (Nasion-Subnasale)
Nasal Root Breadth
Nose Breadth

Biocular Breadth
Interocular Breadth
Nose Length (Subnasale-Sellion)
Nasal Root Breadth
Nose Breadth

HAND MEASUREMENTS

Hand Length
Hand Breadth

Hand Length
Hand Breadth

FOOT MEASUREMENTS

Foot Length
Instep Length
Foot Breadth
Heel Breadth
Ball Circumference

Foot Length
Instep Length
Foot Breadth
Heel Breadth
Ball of Foot Circumference

e. Measurements of U. S. Army Women — 1977

Body measurements taken on U. S. Army women in 1977 are defined and illustrated in: Churchill, E., T. Churchill, J. T. McConville, and R. M. White, Anthropometry of women on the U. S. Army — 1977; Report No. 2 — The basic univariate statistics, Technical Report NATICK/TR-77/024, U. S. Army Natick Research and Development Command, Natick, Mass., 1977. (AD A044 806)

Original term

Term used in this report

Weight

Weight

STANDING MEASUREMENTS

Stature
Cervicale Height
Shoulder Height
Axilla Height
Suprasternale Height
Bustpoint Height
Substernale Height
Elbow (Radiale) Height
Knuckle Height
Waist Height
Crotch Height
Hip (Trochanteric) Height
Buttock Height
Gluteal Furrow Height
Kneecap Height
Tibiale Height
Calf Height
Acromion-Radiale Length
Radiale-Stylian Length

Stature
Cervicale Height
Shoulder (Acromiale) Height
Axilla Height
Suprasternale Height
Bustpoint Height
Substernale Height
Elbow (Radiale) Height
Knuckle Height (Metacarpale III)
Waist Height
Crotch Height
Hip (Trochanteric) Height
Buttock Height
Gluteal Furrow Height
Kneecap (Patella) Height
Tibiale Height
Calf Height
Acromion-Radiale Length
Radiale-Stylian Length

SITTING MEASUREMENTS

Sitting Height
Eye Height, Sitting
Shoulder-Elbow Length
Elbow-Grip Length
Elbow-Fingertip Length
Elbow Rest Height
Thigh Clearance
Knee Height, Sitting
Popliteal Height
Buttock-Knee Length

Sitting Height
Eye Height, Sitting
Shoulder-Elbow Length
Elbow-Grip Length
Elbow-Fingertip Length
Elbow Rest Height
Thigh Clearance Height
Knee Height, Sitting
Popliteal Height, Sitting
Buttock-Knee Length

Measurements of U. S. Army Women — 1977 (continued)

Original term

Term used in this report

DEPTH AND BREAETH MEASUREMENTS

Bust Depth
Waist Depth
Abdominal Extension Depth,
Sitting
Chest Breadth
Waist Breadth
Bispinous Breadth
Hip Breadth
Biacromial Breadth
Shoulder (Bideltoïd) Breadth
Abdominal Extension Breadth,
Sitting
Thigh-to-Thigh Breadth, Sitting

Bust Depth
Waist Depth
Abdominal Extension Depth,
Sitting
Chest Breadth
Waist Breadth
Bispinous Breadth
Hip Breadth, Standing
Biacromial Breadth
Shoulder (Bideltoïd) Breadth
Abdominal Extension Breadth,
Sitting
Thigh-to-Thigh Breadth, Sitting

CIRCUMFERENCES

Neck Circumference
Shoulder Circumference
Chest Circumference at Scye
Bust Circumference
Chest Circumference below Bust
Waist Circumference (Natural)
Waist Circumference (Omphalion)
Hip Circumference
Vertical Trunk Circumference

Vertical Trunk Circumference,
Sitting

Neck Circumference
Shoulder Circumference
Chest Circumference at Scye
Bust Circumference
Chest Circumference below Bust
Waist Circumference (Natural)
Waist Circumference (Omphalion)
Hip (Buttock) Circumference
Vertical Trunk Circumference,
Standing
Vertical Trunk Circumference,
Sitting

LIMB CIRCUMFERENCES

Arm Scye Circumference
Axillary Arm Circumference
Biceps Circumference, Relaxed
Biceps Circumference, Flexed
Elbow Circumference, Flexed
Forearm Circumference, Relaxed
Wrist Circumference
Upper Thigh Circumference
Knee Circumference
Calf Circumference
Ankle Circumference

Scye Circumference
Axillary Arm Circumference
Biceps Circumference, Relaxed
Biceps Circumference, Flexed
Elbow Circumference, Flexed
Forearm Circumference, Relaxed
Wrist Circumference
Upper Thigh Circumference
Knee Circumference
Calf Circumference
Ankle Circumference

Measurements of U. S. Army Women — 1977 (continued)

Original term

Term used in this report

SURFACE MEASUREMENTS

Shoulder Length
Interscye, Back
Interscye, Front
Back Curvature — Bust Level
Back Curvature — Waist Level
Back Curvature — Hip Level
Waist Back Length
Waist Front Length
Neck to Bustpoint
Axilla to Waist
Sleeve Inseam Length
Sleeve Outseam Length
Crotch Length

Shoulder Length
Interscye, Back
Interscye, Front
Back Curvature — Bust Level
Back Curvature — Waist Level
Back Curvature — Hip Level
Waist Back Length
Waist Front Length
Neck to Bustpoint Length
Axilla to Waist Length
Sleeve Inseam Length
Sleeve Outseam Length
Crotch Length

HEAD AND FACE MEASUREMENTS*

Head Circumference
Sagittal Arc
Bitracion-Coronal Arc
Bitracion-Frontal Arc
Bitracion-Menton Arc
Bitracion-Submandibular Arc
Head Length
Glabella to wall
Sellion to wall
Pronasale to wall
Subnasale to wall
Lip Protrusion to wall
Menton to wall
Ectocanthus to wall
Tragion to wall
Head Breadth
Bitracion Breadth
Head Height (Tragion-vertex)
Ectocanthus to vertex
Glabella to vertex
Sellion to vertex
Pronasale to vertex
Subnasale to vertex
Stomion to vertex
Menton to vertex

Head Circumference
Sagittal Arc
Bitracion-Coronal Arc
Bitracion-Frontal Arc
Bitracion-Menton Arc
Bitracion-Submandibular Arc
Head Length
Glabella to back of head
Sellion to back of head
Pronasale to back of head
Subnasale to back of head
Lip Protrusion to back of head
Menton to back of head
Ectocanthus to back of head
Tragion to back of head
Head Breadth
Bitracion Breadth
Head Height (Tragion-top of head)
Ectocanthus to top of head
Glabella to top of head
Sellion to top of head
Pronasale to top of head
Subnasale to top of head
Stomion to top of head
Menton to top of head

Measurements of U. S. Army Women -- 1977 (continued)

Original term

Term used in this report

HEAD AND FACE MEASUREMENTS (continued)

Face Length (Sellion-Menton)	Face Length (Menton-Sellion)
Crinion-Menton	Menton-Crinion
Minimum Frontal Breadth	Minimum Frontal Breadth
Face Breadth (Bizygomatic)	Face Breadth (Bizygomatic)
Biocular Breadth	Biocular Breadth
Interpupillary Distance	Interpupillary Breadth
Nose Length	Nose Length (Subnasale-Sellion)
Nose Breadth	Nose Breadth
Mouth Breadth, Smiling	Mouth Breadth, Smiling

HAND MEASUREMENTS

Hand Length	Hand Length
Palm Length	Palm Length
Hand Breadth	Hand Breadth
Hand Circumference	Hand Circumference

FOOT MEASUREMENTS

Foot Length	Foot Length
Instep Length	Instep Length
Foot Breadth	Foot Breadth
Heel Breadth	Heel Breadth
Foot Circumference	Ball of Foot Circumference
Instep Circumference	Instep Circumference
Heel-Ankle Circumference	Heel-Ankle Circumference
Ankle Height	Ankle Height
Sphyrion Height	Sphyrion Height

* Note on head measurements: A headboard was used to obtain horizontal and vertical head measurements on U. S. Army women in 1977. Horizontal head measurements were made from the landmark back to the vertical surface of the headboard which was tangent to the back of the head. Therefore, these measurements originally were designated as "...to wall", as in "Pronasale to wall." Vertical head measurements were made from the landmark up to the horizontal surface of the headboard which was tangent to the top of the head or vertex. Therefore, these measurements originally were designated as "...to vertex", as in "Pronasale to vertex." However, the terms "(landmark) to back of head" and "(landmark) to top of head" are more accurate descriptive terms for these two groups of head measurements, and thus are used in this report.